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ARTICLES

Toward a General Theory of Error Cycles 1
Jörg Guido Hülsmann

A Critical Note on Fractional-Reserve Free Banking 25
Jesús Huerta de Soto

On the Abuse of Patents as Economic Indicators 51
Pierre Desrochers

Child Labor, Family Income, and the Uruguay Round 75
Jim Rose

BOOK REVIEWS

Central Banking in Theory and Practice 89
Alan S. Blinder
Reviewed by John P. Cochran

The Political Economy of Economic Freedom 93
Alan Peacock
Reviewed by Randall G. Holcombe

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TOWARD A GENERAL THEORY OF ERROR CYCLES

JÖRG GUIDO HÜLSMANN

One of Ludwig von Mises's most important contributions to economic science was the business cycle theory that he first presented in his *Theory of Money and Credit* (1981, ch. 19, esp. pp. 338ff.). This theory has been elaborated by Mises himself and received important additions through the hands of Friedrich A. Hayek and Murray N. Rothbard.[1] Yet in its foundations it remains unshaken as from the day of its first publication.

The purpose of this article is threefold. First, we challenge Mises's theory by arguing that it is not generally and apodictically valid. Therefore, it cannot be part of economic theory which, as Mises himself stated, is a purely logical science of action. Second, we give the outlines of a truly praxeological (and therefore general) theory of error cycles that withstands this specific criticism. And third, Mises's business cycle theory will be restated in the light of the new approach, that is, it will be interpreted as an instance of a more general theory and thus put on more solid grounds.

A CRITIQUE OF AUSTRIAN BUSINESS CYCLE THEORY

Error and Business Cycles

Any business cycle theory is essentially a theory of error. Its aim is to explain the recurrence of the phenomenon that we call crisis; that is, a situation in which the simultaneous economic failure of many people becomes obvious. Thus, business cycle theory not only has to explain the occurrence of error but the *recurrence* of a cluster of errors as well. This reminder is especially useful since many economists tend to interpret the business cycle as an equilibrium phenomenon.[2] Let us spell out what that means in terms ordinary people use. It means that these writers contend that bankruptcies are planned, that the loss of big and small

JÖRG GUIDO HÜLSMANN is a Feodor-Lynen Fellow at the State University of New York at Buffalo. I would like to thank Hans-Hermann Hoppe, N. Stephan Kinsella, and the members of the Laboratoire d'Économie Politique at the University of Paris Panthéon-Assas for comments on this paper. Completion of this essay would not have been possible without support by the DAAD, the Alexander von Humboldt Foundation, and the Ludwig von Mises Institute.

[1]See in particular Mises (1928; 1998, pp. 550ff.); Hayek (1929; 1931); and Rothbard (1993, pp. 854ff; 1983, pt. 1).

[2]See in particular Lucas (1987); Schultz (1975); and also Shmanske (1994).

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fortunes was intended from the outset, and that people could conceive of no better employment for their labor and money than throwing it out the window.

It is to the great merit of the Austrian business cycle theory that it explains recurrent errors in investment decisions by a common cause, namely, the monetary organization that prevails in western civilization. The main features of this system are fractional reserve banks and a central bank operating as a lender of last resort. Under these circumstances commercial banks can unexpectedly increase the quantity of money substitutes (today mainly demand deposits) and, by lending this new money out, push the market interest rates below the level they would have otherwise reached. Thus, with the given production capacities more investment projects are begun than can ultimately be sustained. A systematic error has occurred. It is impossible that all projects are successfully carried out, and this must sooner or later be discovered. When this discovery gains widespread attention, the business cycle has reached the crisis phase. The supposedly least profitable projects are now abandoned and production continues on a more solid base. However, the source that brought about the systematic error is still operating. Still, commercial banks can increase the quantity of their money holdings beyond the quantity of money they may dispose of. And still the central bank helps them in cases of "liquidity crises." Therefore, systematic error is likely to occur again.

Error or failure is a permanent condition of human endeavor. It consists of *choosing an alternative for action that is less important (less preferred) than* another one that could have been executed instead. Austrian business cycle theory does not have to assume that, were it not for inflation, the market participants would not err at all. It can rely entirely on the idea that inflation causes additional errors; that is, more errors than otherwise would have occurred: "Credit expansion in the midst of unemployment will create *more* distortions and malinvestments, *delay* recovery from the preceding boom, and make a *more* grueling recovery necessary in the future" (Rothbard 1983, p. 34).[3] Thus, the Austrian approach gives a realistic account of the trade cycle and provides the only solution that exists to the theoretical problems raised by any business cycle theory.[4]

General Refutation of the Consequentialist Analysis of Error

However, even the present Austrian solution is defective because it relies on a fallacious analysis of error. Ultimately, the traditional Austrian approach consists of giving an explanation of *how error comes about.* It is what could be called a consequentialist explanation. Error is conceived as the consequence of a preceding event; namely, of a change in the conditions of action.[5] Thus, Austrian business cycle theory explains clusters of errors by changes in the quantity of money. It claims that market participants err because the quantity of money is increased by

[3]Emphasis added. See also Mises (1998, pp. 584f.) and Garrison (1991, p. 95).

[4]For a brilliant critique of other approaches see Rothbard (1983, pp. 39ff.); see also Mises (1998, pp. 559f., 580ff.); Hoppe (1983, pp. 64ff.); Garrison (1989; 1991).

[5]This explanation is manifest in the use of the imaginary construction of the evenly rotating economy for the explicit purpose of analyzing "the problems of entrepreneurship and of profit and loss" (Mises 1998, p. 248). It is also evident in statements like "[changes in valuations] are the source from which entrepreneurial profits and losses stem" (ibid., p. 534) or "new data emerge again and again and divert the trend of prices from the previous goal of their movement toward a different final state" (ibid., p. 547).

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the banking system. Their error is manifest in an interest rate that is too low in respect to the prevailing social time-preference.

Before we come to a refutation of this theory, we should note a crucial but hitherto neglected fact. That is, the problem raised by the analysis of error exceeds the limits of business cycle theory. It is a fairly general problem, and it calls for a general solution. For whatever the explanation of error might be, it would have to hold not only for error clusters but also for individual errors. The theory that changes cause error *is* a general solution, even if we can demonstrate it to be wrong. And if we venture to propose a better theory it must necessarily be a general solution as well. In other terms, business cycle theory must be grounded in a general theory of the recurrence of clusters of errors.

According to the consequentialist approach, error is impossible and equilibrium must prevail if conditions do not change any more. Error can only occur if conditions change. However, the crucial problem is that obviously not all changes *necessarily* lead to error. For example, the fact that, for the payment of wages, one needs more cash at the beginning of a month does not surprise the businessman. Or, even if more legs were broken in 1999 than in 1998 this would probably not cause the bankruptcy of health insurance companies. How can these undeniable facts be reconciled with the consequentialist approach? One could claim these changes are part of a larger class of events which, as a class, do not vary in the course of time. Dealing with single elements of a class implies a certain risk, but it does not lead to error. Only if the behavior of the entire class varied would error ensue. Error could thus be conceived of as the consequence of singular changes of class behavior. Similarly, other singular events like the discovery of a law of nature or the invention of an unheard-of product bring about error, too. It is this error-inducing singularity that, according to consequentialism, constitutes what is called uncertainty.[6] However, the existence of singular events could only serve as a basis for a consequentialist explanation of error, if they *implied* error. Otherwise, a mere change of conditions, and even a singular one, could never be a sufficient explanation of error. Does the occurrence of singular events necessarily lead to error? This is the decisive question. Only if this was the case could there ever be a consequentialist business cycle theory. Yet it is definitely not the case. Error cannot be explained by singular changes of conditions because even such changes *can* be anticipated. Anticipation does not, of course, mean that one *knows* what will happen in the future. This could never be the case. Rather it means that one *judges* correctly what the future conditions will be (Hülsmann 1997). We may admit that the conditions of action change every instant, but this does not prevent us from anticipating them.

Another way of attacking consequentialism would be to claim that there can be no singular events in human history. However, this criticism would be unjustified. He who denies the existence of singularity would have to claim that all possible events could be classified in advance. He would also have to make this claim for future states of knowledge. Yet such a claim would be self-contradictory because once people know this general classification they will behave differently, upsetting the pattern

[6]For the distinction between risk and uncertainty see Knight (1921). Mises improved upon Knight's argument by introducing the distinction between class probability and case probability (see Mises 1998, pp.105ff.).

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that, before, explained their actions (Hoppe 1983; 1997). Thus, human choice and creativity account for the singular events that defy all-encompassing classifications.

Rejecting the consequentialist approach to the explanation of error, we side with common sense. For, if error was the necessary consequence of some preceding event then we would have to deny the notion of choice altogether. Freedom of choice does not, to be sure, mean that one can choose any end that one would like to attain. It is not the realm of our fancies. In each choice we can choose the *most important* among the available alternatives, and we can choose a just action rather than committing a crime. We always have the power to do this. The claim that a previous event determines the success of our action corresponds exactly to the dubious statement that one had to murder one's grandmother because one was born poor.

Refutation of the Consequentialist Approach to Business Cycle Theory

How does the preceding discussion translate into the realm of business cycle theory? The consequentialist approach implied in the traditional Austrian theory states that clusters of errors on the market are the consequence of increases in the quantity of money. Yet, such increases can be anticipated. The mere fact that the quantity of money changes does not prevent the entrepreneurs from judging correctly what influence it will exercise on market prices. Therefore, an increased quantity of money does not imply that too low of an interest rate be established. This point has been conceded by Mises:

> It may be that business men will in the future react to credit expansion in another manner than they did in the past. It may be that they will avoid using for an expansion of their operations the easy money available, because they will keep in mind the inevitable end of the boom. (Mises 1940, pp. 696f.)[7]

One critical remark needs to be added to this statement. It concerns the question of precisely how the correct interest rate would be established in spite of an ongoing inflation. Mises claims that a more prudent attitude toward the "easy money available" would avoid the business cycle. Such an attitude among the owners of the most profitable businesses would merely drive the interest rate down and thus strengthen their competitors. Rather, the correct interest rate would be established by credit-taking entrepreneurs, who anticipate that the increased quantity of money will permit higher selling prices in the future. These entrepreneurs would bid for higher interest rates; that is, they would create a higher price premium on the gross market rate of interest. From this it follows that inflation is never favorable to the prudent. It changes the conditions of economic success in favor of the gamblers and rent-seekers (Hülsmann 1996b, pp. 197ff.).

In Mises's view, a business cycle is unavoidable whenever the entrepreneurs do not refrain from using additional fiduciary media. He said: "Issuance of fiduciary media, no matter what its quantity may be, always sets in motion those changes in the price structure the description of which is the task of the trade cycle" (Mises 1998, p. 442, n. 17). Therefore, all that could be done was to restrict credit as soon as the symptoms of the business cycle appear. Then "the boom comes to an early end; a

[7]The quoted passage is translated in Mises (1943, p. 251).

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recession starts" (ibid., p. 798). In this context, Mises explicitly denies the validity of the above argument that error could be avoided by entrepreneurs establishing a higher price premium on interest rates in advance of the future effects of inflation. He claims that the "price premium always lags behind the changes in purchasing power because what generates it is not the change in the supply of money (in the broader sense), but the—necessarily later-occurring—effects of these changes upon the price structure" (ibid., p. 545).[8] Thus, Mises holds that the causation at work necessarily proceeds in two steps. At first, the inflation creates higher prices for the factors of production while interest rates remain unaffected or are even lowered (which is what constitutes the error). Then this price increase is incorporated into expectations and brings about a higher price premium on interest rates.[9]

However, this reasoning is defective on several grounds. First of all, Mises gives no argument why the actors *could not* "compute in advance the date and the extent of [the price changes generated by the alteration in the money relation] with regard to all commodities and services which directly or indirectly count for their own state of satisfaction" (Mises 1998, p. 544). He merely contends that "such computations cannot be established because their performance would require a perfect knowledge of future conditions and valuations" (ibid.). Of course, we do not have to quarrel about whether human beings enjoy perfect foresight or not. This is not the question at stake. The question is not whether people are *likely* never to fail but whether it is *conceivable* that they do not err in their undertakings. The answer to this latter question is unambiguous: people definitely *can* anticipate future events. This is a serious problem for Mises's business cycle theory, which relies on the proposition that inflation implies error. Indeed, the concept of implication in its strong praxeological sense permits no conceivable exceptions. If it is possible that the effects of inflation are correctly anticipated then inflation does not necessarily lead to error. A theory stressing an inflation-induced error cycle then must fall to the ground. But let us concede Mises's point for the sake of argument. Let us admit that it is impossible that all market participants anticipate the effects of inflation on all commodities. The question remains, then, whether this is really required for a price premium to be established in advance of future events. And this question has to be answered in the negative. As we have stated above, business cycle theory does not have to rely on the assumption that there was no error at all before the cause of the business cycle set in.[10] It is sufficient to explain why *more* errors then occur. Similarly, for a price premium to be established in advance, it is not necessary to stipulate that all market participants anticipate the effects of inflation. We merely assume that anticipating the

[8]See also the analogous argument (Mises 1943, p. 547f.).

[9]Hayek has further elaborated this kind of reasoning in terms of a mechanistic relationship between prices. See in particular Hayek (1939).

[10]One could argue that, from Mises's methodological point of view, business cycle theory has to rely precisely on this assumption. For, according to Mises, error and its offspring—profit and loss—has to be analyzed by a comparison to the evenly rotating economy (ERE); that is, to a state of affairs in which no error occurs (Mises 1998, p. 248). In this case, it is true; a "business cycle" would result even if only *some* market participants did not anticipate all effects of an ongoing inflation. For even some few errors represent a "cluster" in comparison to a situation of no error at all. However, as the market participants in the ERE are admittedly not acting human beings, but reacting automatons, this construction is even more questionable than the assumption that *all* market participants anticipate *all* the effects of inflation—which is at least logically conceivable.

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effects of inflation is not more difficult than anticipating the effects of other changes. If this is the case, then, there will be no cluster of errors in consequence of inflation; that is, there will be no business cycle.

Before dealing with the important issue of whether or not reckoning with inflation is more difficult than anticipating other changes, let us briefly discuss two other problems in Mises's argument. The first refers to his account of the price premium in the final state of a ceaseless inflation. Here, Mises claims, "things become different. The panic of the currency catastrophe, the crack-up boom, is not only characterized by a tendency for prices to rise beyond all measure, but also by a rise beyond all measure of the positive price premium" (1998, p. 545). Now, this clearly contradicts his claim that price premiums always lag behind the changes in purchasing power. For if they did they would have to do so in hyperinflations, as well. Mises could, therefore, give no explanation of the enormous price premiums in hyperinflation. If, by contrast, price premiums did not always lag behind changes in purchasing power then error would *not* necessarily follow from inflation. Mises's trade cycle theory would thus again be contradicted. A further problem concerns a contradiction between his consequentialist approach to business cycle theory and his more general explanation of profits and losses. Mises's central tenet in the latter is that the

> only source from which an entrepreneur's profits stem is his ability to anticipate better than other people the future demand of the consumers . . . the real entrepreneur is a speculator, a man eager to utilize his opinion about the future structure of the market for business operations promising profits. This specific anticipative understanding of the conditions of the uncertain future defies any rules and systematization. (Mises 1998, pp. 290, 585)[11]

In other words, it is not a specific event that causes error and thereby profits and losses. Rather, it is entrepreneurial ability alone; that is, entrepreneurial choice that manifests errors on the one hand and correct expectations on the other hand.

Mises neither explains why inflation *always* leads to error nor why the market participants *cannot* anticipate its effects. He therefore fails to prove that inflation implies error. It would also not be a sufficient solution to claim that credit expansions "distort" prices and calculations. This would require an explanation of the difference between distortions and normal modifications of the price structure. Indeed, all ongoing events exert some influence on prices and calculations. All of them could therefore be said to distort prices. Murray Rothbard has attempted to solve this problem in the following way:

> Bank credit expansion *distorts* the market's reflection of the pattern of voluntary time preferences; the gold inflow *embodies changes* in the structure of voluntary time preferences . . . time preferences may temporarily fall during the transition period before the effect of increased gold on the price system is completed . . . The fall will cause a temporary increase in saved funds, an increase that will disappear once the effects of the new money on prices are completed. (Rothbard 1983, p. 38)

Of course, time preferences *may* fall during the transition period as well as rise. The question, however, is not what *may* happen to time preferences but whether

[11] See also Mises (1980b).

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they have to fall (or rise) as a consequence of increased gold. Is a lower time preference implied in an increase of money? This would be irreconcilable with the theory of value to which Rothbard adheres. Consumers' preferences are not already implied in some quantities of commodities. Therefore, time preference, which is but the temporal aspect of consumer's choices, cannot be determined by the quantity of gold. But, even if we admit Rothbard's point for the sake of argument, it would be impossible to arrive at his conclusion. For why, one would have to ask, does this point apply only to gold? Why does an increase of fiat money not lead to falling time preferences as well? Here, Rothbard fails to establish a viable distinction. He merely *asserts* that bank credit distorts whereas a gold inflow embodies real changes.

Now, let us come back to the question of whether reckoning with inflation is *more difficult* than, say, reckoning with a change in consumer demand from one product to another or in the savings–consumption schedules. This argument has also been advanced by Rothbard. He states:

> [entrepreneurs] could not forecast the results of a credit expansion, because the credit expansion tampered with all their moorings, and distorted interest rates and calculations of capital. No such tampering takes place when gold flows into the economy, and the normal forecasting ability of the entrepreneurs is allowed full sway. (Rothbard 1983, p. 38)[12]

Strictly speaking, Rothbard's statement reduces to the claim that it is more difficult to forecast credit expansions because it is more difficult to forecast them. He uses different words to distinguish the influence of credit expansions from those of other changes like changes in consumer demand, when he says that credit expansions "distort" prices and calculation. As we have seen above, this chain of reasoning begs the question. However, a somewhat different argument seems to be implied in the expression "tampering" insofar as this is meant to suggest an influence that is hidden from the rest of the market participants. According to this argument, it would not be increases in the quantity of money *as such* that lead to error. Rather, clusters of error would result only if these increases were veiled. Moreover, and most importantly, Rothbard suggests that tampering is more likely to occur under government interventions than on the free market. Thus, the emphasis of the argument is shifted to completely different grounds. Clusters of errors are no longer explained in the narrow terms of monetary changes but in the wider ones of government activities. This new emphasis will indeed play an important role in the present article.

To complete our critique of the traditional Austrian business cycle theory, let us restate our main tenet, namely, that taking account of inflation is not a problem distinct from other problems of anticipation. The effects of inflation can be anticipated. Therefore, inflation does not imply error. The significance of this conclusion for economic theory can hardly be overemphasized. For, it means that the inflation-induced business cycle is, at least in light of the traditional theory, not a matter of logical necessity but of historical contingency. Whereas this fact has been clearly recognized

[12]See also Rothbard (1990, p. 60). A variant is Mises's claim that a slight and continuous increase of money and money substitutes can be handled by entrepreneurs (see Mises 1998, p. 574). Of course, this represents merely an additional problem for his consequentialist explanation of error. For now one has to explain why constant inflation does not or even cannot lead to errors while one still has not explained why irregular inflation *must* lead to error.

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(Lachmann 1943, pp. 108ff.; Selgin 1990, p. 53 n.; Salerno 1995 pp. 307ff.) it seems as if its full importance for business cycle theory has been ignored. If error is not necessarily related to inflation, then there is no Austrian account of the *recurrence* of error. If an increase in the quantity of money can cause widespread error today and no error at all tomorrow, then clusters of business errors can hardly be deduced from inflation alone. Rather one would now have to explain under which conditions inflation leads to error and under which conditions it does not. This additional explanation would then be the business cycle theory. As long as this explanation does not exist—and it does not exist—we cannot avoid the conclusion that, at present, there is no Austrian business cycle theory at all.

In a certain sense, we are back to zero. If change *as such* cannot be the cause of error, then a business cycle theory seems to be impossible. This, however, is but a manifestation of the fundamental defect of all consequentialist approaches to the explanation of error. All attempts to conceive of error as the consequence of some preceding event must fail. As long as human beings choose, that is, as long as they are beings with free will, the correctness of choice must in principle be unrelated to preceding events and choices. Instances of error cannot lend themselves to a consequentialist explanation.

What are, then, the theoretical options that we face—apart from abandoning the idea of a business cycle theory altogether?[13] In what follows we shall argue that there is not only a case for Austrian business cycle theory, but that it can be derived from the framework of a general theory of error cycles. However, in contrast to the traditional consequentialist approach we shall explain the recurrence of clusters of errors along essentialist lines.

An Essentialist Approach to the Analysis of Error Cycles

The Error Cycle

The essentialist approach to the analysis of error does not attempt to deduce error from preceding events. Rather, it takes error as an ultimate given, submitting it to a purely logical investigation. It completely abandons the question, How does error come about?, in favor of the question, What are the implications of error?

The theory of error cycles starts from the fact that error is committed at the moment of choice but only revealed in the future (Menger 1976, pp. 67–71). There is always a time lag between a wrong choice and the discovery that it was a wrong choice, and at the moment of choice, one is never *aware* of one's errors—otherwise one would not engage in this action at all. The necessary time lag between an error and its discovery implies an error cycle, with all the familiar features of the business cycle theory. Fundamentally, two stages can be distinguished. At the beginning of the first stage the error is committed. During this error phase, acting man believes he attains more important ends than he actually is able to attain (in business cycle theory this phase is somewhat misleadingly called "boom"). The longer the error stage, the more investment decisions will be made on the grounds of the erroneous assumption.[14] The "crisis" marks the point of time

[13] For the view that business cycle theory has to be abandoned, see for example Eucken (1989, p. 180). Eucken claims that each business cycle requires an individual historical account.

[14] On the psychological aspects of the error phase, and to what extent it goes hand-in-hand with mass irrationality and even insanity, see Cantor's (1994) brilliant study.

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when the error is discovered. Then begins the second stage, a phase of reestablished sobriety. In the crisis, acting man discovers the extent of the damage done in the past. He gains a sober insight into the real options that he now faces. His actions are put again on a sound basis—until the next error occurs.

Thus, the general theory of error cycles departs from an analysis of individual errors. Any crisis can be described in terms of an individual error cycle. However, our aim is not to explain the particular errors that invariably occur as long as there is human life. We have to explain the recurrence of clusters of errors, that is, the repetitive occurrence of more or less synchronous errors of many persons by deducing them from a common cause. Therefore, a program for the essentialist explanation of recurrent clusters of errors has to identify more or less permanent patterns of action (institutions) in which the error of many persons is *inherent*. Instances of crises are then explained as situations in which many acting persons *become aware* of their errors or of the consequences of their errors.

The Use of Government as an Illusion

There are many institutions involving many people. In light of the consequentialist approach to the explanation of error, all lend themselves to the explanation of clusters of errors. The only problem left would be to explain the recurrence of those clusters. However, if we think along essentialist lines, then the main problem is to find institutions in which some kind of error is inherent. This is a serious problem because institutions should be expected to *serve* the endeavors of acting man rather than to obstruct them. And even if one can conceive of erroneous institutions, it seems to be somewhat difficult to prove that they are inherently erroneous. It is, for example, a common phenomenon that an institution *becomes* superfluous when conditions change. But this implies that it has served at least for a while beforehand. Rather than being inherently erroneous it simply failed as the conditions of action changed.[15] By contrast, how is it conceivable that an institution is erroneous irrespective of all other conditions of action? We must look for a kind of error that is independent of time and place. Only an institution built upon such an error is an inherently erroneous institution. Such an error, which is independent of time and place, we call illusion.

Now, there is a kind of widespread institution in which illusion is inherent. This institution is government; that is, a person or a group of persons who permanently violate property rights of other people (the subjects of government).[16] To what extent does the existence of government represent a general illusion on the side of its subjects? Let us, first, observe that each society is based on a private-property régime as its nucleus of civilization. There can be no society where there is no peaceful appropriation based on self-ownership. For we can only meaningfully speak of society if one has the right to appropriate yet unowned goods, to

[15]A discussion of this change in the character of institutions can be found in Wieser (1924). Wieser's analysis of the rise and fall of institutions used Menger (1985, pt. 2) as a foundation.

[16]For the nature of government as being able to violate private property, see, for example, Rothbard (1998). Even though it is a very important question as to how such an institution could ever emerge, this topic need not be addressed here. Our purpose is more limited, thus we can take the existence of government as an ultimate given and confine ourselves to analyzing its implications. Moreover, there are already excellent investigations into the emergence of government. See especially Oppenheimer (1990); de Jouvenel (1972); Nock (1994); Krippendorf (1985); Higgs (1987).

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transform them through the expense of one's labor, and to exchange them against other goods on the market. Any appropriation inconsistent with these three ways would mean that the appropriator claims a right that he denies to his fellow; that is, ultimately, the right to self-ownership. As far as such aggressive acts occur there is no society but civil war, be it open or suppressed. Non-aggressive actions are a necessary feature of human life and of civilization. Violations of property represent partial obstructions of life in society. This does not mean that, in reality, there *are* no aggressive acts. There will be aggression as long as there are remnants of the human race. However, the crucial point is that aggressive actions do not constitute a society; they rather destroy its achievements. Thus, they represent additional problems for those eager to profit from the division of labor. They are *additional* problems because any act of violence presupposes that the goods that are violently appropriated or modified have been rightfully possessed beforehand. A purely private-property régime is logically prior to violent interventions.[17] Hence, the problems created by the latter must be added to the problems confronting any civilization.

The illusion in the context of aggression is only implied in the deliberate institution of violence; that is, in government. It does not refer to aggression as such. The victim of ordinary "private" violence is very conscious of what is going on. But most victims of governmental violence believe that this aggression is necessary for life in society. No one has expressed this more brilliantly and concisely than Bastiat (1986, p. 252), who defined government as "the great fiction by the help of which everybody tries to live at the expenses of all other people."[18] This fiction or illusion is precisely what distinguishes governments from ordinary aggressors. The existence of a government presupposes that a majority of the population (or, in any case, *many* persons) support it. Each government needs the consent of the majority in order to establish its rule.[19] This, in turn, presupposes that these people believe aggression to be useful in respect to purposes different from those of mere exploitation. People believe that aggression is necessary to produce certain goods like protection, insurance, education, judicial advice, etc. This, however, is a blatant error. Any good can be produced on the market if consumers are willing to give enough of their property in exchange for it. If a good cannot be produced profitably, this means that the market participants do conceive of more important uses of their property. Employing aggression to produce the good does not change this fact. It merely takes away the factors of production from enterprises which would have used them in a way that, according to the valuations of property owners, is more important.

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[17]See on this point, among earlier authors, Bastiat (1983, pp. 148ff.; 1986, pp. 227ff.); de Molinari (1849); Spencer (1995, pp.175ff.; 1981, pp. 149ff.). Among later authors, see in particular Rothbard (1978; 1982); Hoppe (1987; 1989; 1993a).

[18]Recently, another French author has forcefully captured this aspect of aggression in his analysis of communism: "The origin of communism is not situated in history, not in the concrete, not in the 'praxis,' but, quite to the contrary, in the human capacity to ignore it" (Revel 1992, p. 262). Revel also gives a splendid quote from Saint Augustine, *Confessions*, X, 34: "So much is truth beloved that whoever loves something else wishes it to be the truth." See also Hoppe (1987; 1989; 1993b, ch. 4, esp. pp. 102ff.); Baader (1997). In this context one is also reminded of the Emperor's new clothes, or of Plato's tale of the ring of Gyges.

[19]See de La Boétie (1993); Hume (1987b, pp. 32ff.); see also Wieser (1926, pp. 5ff.); and Mises (1998, pp. 188ff.).

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Before we enter into further discussion, note that all the formal conditions for a general theory of recurrent clusters of errors are fulfilled in this new approach: because government is an institution, it can account for the *recurrence* of error in the course of time. Because it is an institution involving many people, it can account for clusters of error. Furthermore, there can be no government without an illusion (that government is a part of, and necessary for, life in society) being widespread. Therefore, government and recurrent clusters of error always go hand-in-hand. They coexist. No consequentialist argument is needed to establish this connection.

Government and Error Cycles

Like any other institutionalized large activity, government has a profound impact on society. It shapes society's capital and knowledge structure, and its structure of character types. For example, consider the case of government subsidies for aircraft production. They keep the subsidized enterprises in business longer than they would be otherwise. Capital is replaced in aircraft production rather than being invested elsewhere. Certain quantities of steel, electricity, land, workers, etc. are bound up in the production of airplanes rather than, say, in the production of trains or the printing of books. As a consequence, people continue to learn all of the things needed for aircraft production rather than learning about how to make better trains or books. Some people now even begin to learn things needed for the acquisition of government funds. They learn how to lobby, how to bribe, how to recognize the best moment for asking for more funds, how to smear and threaten any opposition. These are the effects not only of subsidies but of any government intervention. Without it, these sorts of capital goods and knowledge and character would be valueless. In today's industrialized nations there are many industries and professions that depend entirely on the existence of government. Just think of the farmers, Europe's steel and coal industries, operas and orchestras, teachers and professors at public schools and universities, and of course public utilities and other government agencies like the IRS, the Supreme Court, the Department of Justice, etc. What would all these organizations and persons do without government intervention on their behalf? They would not survive for a minute. The organizations would go bankrupt and the persons would have to start from scratch, rebuilding their human capital. Yet why should a government ever cease all or part of its interventions, thus inducing a crisis? This is the question our essentialist error cycle theory has to answer.

One general answer is, because government interventions *do* harm some people to the profit of other people, and because some of these persons do not fall prey to the illusion that government is necessary or beneficial. They will try to enlighten their fellows about the true nature of government. Whenever they succeed in doing so government is doomed and with it the human capital and other capital that depends on it. This is the illusion cycle of government in its most general form. Let us observe that we do not have to make any assumptions about when the attempts to abolish government succeed. We merely have to state that a government can be abolished and that, if it is abolished, the illusion is brought to an end. However, our main interest is not in single illusion cycles but in explaining recurrent general crises. Thus, the decisive question is whether government intervention as such, or at least some kind of government intervention, must necessarily lead to breakdowns that make the general error evident without yet being necessarily accompanied by an abolition of government. In this case, a

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future repetition of the intervention would be possible and lead to further breakdowns and cycles. This would be an explanation for the recurrence of general crises.

Thus, let us first analyze a kind of government intervention that accounts for recurrent crises. Government activity must lead to recurrent general breakdowns whenever it implies fraud. The victim of fraudulent behavior is not aware of his situation and thus behaves as if everything was still in order. He thinks that he still can realize all the projects he had planned. He does not know that the quantity of his means has been diminished. Therefore, he will not adjust the structure of his property to the new circumstances. He is likely to leave for holidays in cases where he should rather begin to save and live from hand to mouth. If fraud occurs on a large scale, society's capital structure will be distorted in an exactly analogous way. People do not apprehend that the capital stock has been diminished by the embezzler and needs to be refilled through savings. Sooner or later they will discover this error. This is when the crisis sets in. Now, it is true that fraud could occur even if no government existed. Even a free society could be partially obstructed by more or less large-scale fraud. However, the crucial fact is that these partial obstructions of the market could never account for the *recurrence* of crises. In a free society, no embezzler could continue his business and quietly prepare the next fraud. This is a privilege of governments, insofar as they operate under the general illusion that they are necessary for the working of society. In many cases governments can commit fraud without that fraud being recognized as such (this is especially the case with money, which we will discuss in the next section). Even if government's fraud is recognized as being fraud this does not lead to government's abolition as long as the general public is deluded about its nature. The king might abdicate or the members of parliament might change, but not the institution of government itself. Thus, fraud will be tried again and subsequently provoke the next crisis. In this account we do not have to stipulate that all of government's attempts to commit fraud succeed (whereas, for example, the consequentialist approach to business cycle theory has to stipulate a necessary relationship between increases of the quantity of money and error). We merely have to point out that a government *can* commit fraud and that, *if* it commits fraud, this does not lead to its abolition.

Now let us deal with the question of whether all kinds of government intervention must, in the long run, lead to breakdown. We think the answer is in the affirmative, and it is based on Mises's famous calculation argument. The more intervention increases the less it can work, because it impedes economic calculation. The more private property is violated the more the price system, and thus the basis for a rational allocation of resources, is distorted.[20] Increased intervention brings about reduced efficiency in capital investments. Small interventions might not render calculation impossible, but interventions might not remain small because of competition on the political level and because there is no natural limit for government growth outside the exploitable stock of property.[21] One thing is sure—individuals and groups competing for government power will never be satisfied with the present level of interventionism. Warmongers long for bigger

[20]See Mises (1998, ch. 26) and Rothbard (1993). On Mises's calculation argument see the important contributions of Salerno (1990; 1993). See also Hoppe (1996) and Hülsmann (1997).

[21]See on this important point the pioneering work of Rothbard (1993, pp. 542ff., 825ff., 830ff.) and Klein (1997).

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armies, statist teachers want to keep the children longer in school, some political entrepreneurs ask for export guaranties, others want to prevent unfair competition on the domestic market, etc. The only question is whether they get their way. Because government rests entirely on an illusion, its further growth requires the present level of illusion to be extended. In order to grow, government must, by whatever device, make its subjects believe that they profit from its new actions. Here it enjoys two big advantages. On the one hand, the subjects already believe government to be necessary, if only within certain limits. Therefore, new encroachments of government do not differ in principle but only in degree from its earlier activities. The existence of government implies that *some* aggression is held to be necessary. As the distinction between peaceful action and aggression is permanently blurred, the promotion of more far-reaching illusions is facilitated. On the other hand, the negative impact of interventionism on prosperity can only be established by sound reasoning and never just by reference to observations. If people begin to starve, the statists claim that this is not because of, but in spite of, interventionism. Rather than being reduced, government needs more power to bring the cure.

The outcome of the ideological struggle for and against government is an empirical question.[22] Either the statists and the friends of liberty might prevail when Armageddon comes. But this indeterminacy poses no problem for our theory. All that counts for our purposes is that the statists *can* win the struggle. In this case there will be a general economic downturn because no developed structure of capital can be maintained or extended without the possibility of economic calculation. Government will consume more and more property until nothing is left that still could be consumed. Total confidence in government leads to total government; that is, to all-encompassing socialism and to all-encompassing capital consumption. The end-state of really-existing socialism, for example, bore all the characteristics of a long illusion cycle.

> At the moment when a country is forced to abandon communism, it does not find itself on the level that was reached at the beginning of the communist phase but at a very much lower one, virtually nowhere. This is so not only with regard to the economy, but equally with regard to the political institutions, to social relationships, to cultural life. (Revel 1992, pp. 219f.)

If, then, government is not abandoned, the next cycle will be already on the way.

General and Specific Cycle Theories

We have outlined a general theory that allows us to deduce recurrent clusters of error from the very existence of government. It might be useful to add an observation on the application of our theory to more concrete cases. Government activity and widespread errors necessarily go in hand. This is the central tenet of our theory. However, the fact that the existence of government is a manifestation of error is entirely independent of the question of where government is manifested

[22] In other words, we deny that there is a kind of *inescapable* escalation mechanism of government interventions, with one intervention leading *necessarily* to the next one. For different approaches to explain interventions as the consequence of other interventions, see Condillac (1795, pp. 316ff.); Spencer (1981, pp. 45f, 79ff.); Mises (1977, pp. 150–51); Grinder and Hagel (1977, pp. 69ff.).

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in concreto. The general theory of error cycles does not have to identify a concrete institution as being a part of government. As a theory *a priori* it leaves this problem open. Any valid business cycle theory can rely on it precisely because the general theory of error cycles does not venture to solve this problem and because its validity does not depend on such a solution. Rather it is the very task of *applications* of the general doctrine to particular conditions to provide such a solution. This means that one has to identify particular instances of government intervention and spell out where precisely the illusion is manifested. As a result, there would be various specific *error* cycle theories (the economic aspect of which would be specific *business* cycle theories).[23]

Our further discussion will nevertheless be confined to the narrow but important area of government meddling with money. The task will be to reconstruct the traditional Austrian business cycle theory as an application of the general theory of error cycles. Austrian business cycle theory has successfully stressed the role of money as an institution that is important for almost all market participants. It could elegantly explain the occurrence of clusters of errors, and the following discussion can rely entirely on this valuable insight. In accordance with the principle that widespread error cycles are an implication of government activity one has to focus on government meddling with money rather than on changes of the quantity of money *per se*. On this issue Mises and Rothbard were, of course, at least intuitively right. Rothbard (1993, pp. 850ff.) even properly discussed business cycles in his chapters dealing with government interferences in the economy.[24] However, we have seen that in essence his business cycle theory still followed the old Misesian lines. We now have to correct this remaining shortcoming by putting the old theory in our new terms.

A Reconstruction of Business Cycle Theory

The Fraud Cycle

Inflation is "the process of issuing money beyond any increase in the stock of specie" (Rothbard 1993, p. 851). Thus, either it consists of an increase in fiat money or an increase in titles of ownership and money without a corresponding increase of money in the hands of the issuing agency. The first technique is applied, for example, when government central banks print new paper money. The second technique is usually called fractional-reserve banking. In both cases, inflation is a form of aggression against the property of some market participants, and both forms of inflation can be fruitfully analyzed when we ask whether the inflation is perceived or not perceived (in the case of fraud). Our further investigation has to begin from this crucial distinction. Either inflation is perceived or it is not.[25] Let us first discuss the latter case.

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[23] See, for example, Mises's (1998, p. 586) observations on the "corn-hog cycle" or Hoppe's (1993c, ch. 3, pp. 61ff.) pioneering study on the dialectics of domestic and foreign government activity.

[24] Also see on this point also de Soto (1994, pp. 157f.). Mises (1998, p. 573) asserted that business cycles could be a market phenomenon, but that "*today* credit expansion is exclusively a government practice" (ibid, p. 794, emphasis added).

[25] For an analysis of fractional-reserve banking on the basis of this distinction, see Hülsmann (1996a, pp. 213ff.; 1996, pp. 35ff.). For a critique of fractional-reserve banking see also Rothbard (1991) and de Soto (1998).

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Inflation makes future selling prices higher than they otherwise would have been. If the entrepreneurs do not anticipate this they will not bid higher interest rates on the loan market into which the new money sooner or later will be poured. Therefore, the new money will be employed to finance some other additional projects. Thus, more investment projects are begun than can ultimately be completed, for the quantity of the factors of production has not increased. Merely the quantity of fiat or fiduciary money has increased without the market participants noticing it. However, sooner or later the fraud will be detected. Then those projects will be abandoned that cannot be completed and only the most important (that is, the most profitable) projects will be further pursued.

One easily recognizes that the above description of the fraud cycle is exactly what the traditional Austrian business cycle theory is about. Yet, we have to qualify the traditional account in one respect. It is not the mere increase in the quantity of money that leads to the fraud cycle, but government activity. Government meddling with money is, to be sure, not fraudulent *per se*, but as we shall see it is nevertheless the necessary condition for fraud-induced business cycles. Before we demonstrate this assertion let us briefly point out the fact that government meddling with money, at least, facilitates fraud. First, as government is the monopoly owner of the whole judicial and police apparatus there are no effective means left to control the activities of banks and fiat money producers. Second, it is the proclaimed goal of central banks to reduce unemployment through inflation. This is possible only if the rest of the market participants remain ignorant about the inflation (Mises 1980c). In order to attain their self-proclaimed ends, central banks must try to deceive the other market participants. Third, as inflation can only benefit some market participants at the expense of all others, it must be hidden from the distrusting public. The fraud cycle is therefore likely to recur as long as and insofar as government meddling with money takes place. It is the very purpose of monetary interventions to commit fraud on large numbers of the market participants.

Now, one could insist that fraud is not a feature particular to government. Even on the free market there could be counterfeiters and fraudulent bankers holding only fractional reserves for the money substitutes they issued. This is true. However, such instances could never be sufficient to establish a business cycle theory. Let us recall that any such theory has to explain why there is a cluster of errors and why this cluster of errors is likely to occur again. Pointing to the possibility of fraud on the free market does not solve these problems. At best, one can in this manner explain *clusters* of errors, but one invariably fails to explain their recurrence.

Imagine a commercial bank that has been brilliantly managed for four generations and has been able to expand its activities over a large area. Suppose further that the next heir is an utterly evil person who abuses the confidence of his customers. He commits fraud by holding only fractional reserves. Certainly this leads to a relatively general error cycle. Many market participants are affected when he eventually goes bankrupt because his fraud created a cluster of errors. We could consider an even worse case by supposing that the evil heir convinces some, or even all, of his fellow bankers to do the same thing. This would further enhance the resulting cluster of errors and make for a devastating crisis. The crucial question remains: what about the recurrence? Here the contention that the business cycle could be a free-market phenomenon invariably fails. It is inconceivable that, as long as the other market participants consider the activities of

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those bankers to be criminal acts, they may continue. Other bankers will take their place, and as banking is no fraudulent business *per se* we cannot infer from this large-scale crime that it has to occur again. Only if the other members of society think, for whatever reasons, that those activities were basically unobjectionable, can embezzlers go on and set out for the next fraud.

Here, one last objection can be advanced, since we qualified our statements by saying "as long as the other market participants consider the activities of fractional-reserve bankers to be criminal acts." This statement almost forces one to ask *so what?* Everybody has the right to *think* whatever he wants. On the free market nobody is told how he should think about the conduct of other people. How, then, could one deny that such widespread error is likely to recur on the free market?

Indeed, if this were right then the business cycle could conceivably be a free-market phenomenon. Yet the argument is completely misdirected. For the difference between a free society and a society that is obstructed by government is precisely what the members of society think on issues like this one. The free market is not something that is established once and for all and independently of the beliefs that are held by the public. It is, rather, actions inspired by certain unjust beliefs that constitute governments, just as the free market is a manifestation of certain just beliefs. If fractional-reserve bankers go unpunished because the market participants believe this business to be legitimate then there is, *ipso facto*, government.[26] Fractional-reserve bankers then are persons who may permanently violate the property rights of other people. Therefore, once fractional-reserve banking becomes an institution, it *is* an instance of government.

The Illusion Cycle I: Fractional-Reserve Banking

The fact that unveiled inflation can be tolerated by the market participants merits further consideration. For, this will reveal that business cycle theory has a much larger scope than could be assumed by simply considering the fraud-induced business cycle that, in fact, was the subject matter of traditional business cycle theory. Unveiled inflation can take the form either of additional issues of fiat money or of fractional-reserve banking. Let us discuss the latter case first.

The effects that the fiduciary issues of fractional-reserve banks will have on the price structure *can* be anticipated. People can adjust their activities to the distribution that will occur under this inflationary influence. If the market participants take account of the forthcoming inflation, they need not anticipate every single effect it might produce. It would be entirely sufficient that, in incorporating inflation into their plans, they are no less successful than in reckoning with other influences. Insofar as this is the case, inflation brings about "only" redistributions of income. But there is no fraud-induced

[26] See Rothbard's analogous statement:

> [I]t would be empty and meaningless for [someone] to trumpet that he does not "really" own some or all of what he has produced . . . for in fact the use and *therefore* the ownership has been already his. [Everyone] in natural fact, owns his own self and the extension of this self into the material world, neither more nor less. (1982, p. 34)

The same thing holds true for Rothbard's brilliant anti-slavery argument: "[A man] cannot transfer himself, even if he wished, into another man's permanent capital good" (ibid., p. 38). Someone claiming that the interdiction of fractional-reserve banking would infringe upon man's freedom of contract would have to hold the defense of slavery to be a like infringement.

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business cycle. Does this mean, however, that there is no business cycle at all? Let us recall that the existence of a business cycle requires that a widespread error occur. It does not matter *when* this error is detected. We can content ourselves with the certainty *that* sooner or later it must be detected.

What then is the widespread error in the case of fractional-reserve banking? Here two claims can be made. The first is that fractional-reserve banking is, from the outset, doomed to fail. The second is that it is a mere device for enforced redistribution. As a monetary system it has no advantages over a 100-percent coverage of money substitutes. Its only real purpose is to benefit some people at the expense of other people. As a consequence, it can never benefit the majority of the market participants. If these statements are right then it would have to be conceded that adherence to this system is based on an illusion. The illusion of the market participants would be to believe that fractional-reserve banking is something else than a part of government, that it serves something else than the exploitation of one part of the population by another part. As we have outlined in our general argument above, the conscious toleration of inflation cannot mean that the majority of market participants think that they are robbed. For, in this case, they would immediately stop it. Rather, they must think that continued inflation is, for whatever reasons, in their interest. Thus, the customers of fractional-reserve banks may think themselves benefited by this system because it permits lower interest rates on loans and interest rates on demand deposits, and because abolishing it would condemn the banks to bankruptcy. This is precisely the illusion in question. Indeed, interest rates are not generally lowered by an increased quantity of money. In the first part of this article we have shown why this is so: if the entrepreneurs anticipate the inflation, they will bid higher interest rates for the credit offered on the market. Moreover, even if inflation was not anticipated and interest rates were pushed below the level, they would otherwise have reached the conclusion that this would not benefit the bulk of the public. For, in this case, the fraud-induced business cycle that we described in the previous section would ensue. Furthermore, in respect to the interest paid on demand deposits, one has to remark that this measure can never be to the advantage of the majority. For interest on demand deposits becomes possible only by robbing some people. And interest is only a fraction of the loot, the rest goes to the fractional-reserve banks. Thus, if everyone has a demand deposit then the banks are the only market participants who profit systematically from the possibility of fiduciary issues. Finally, it is also an illusion to believe that a fractional-reserve system can live on forever. A fractional-reserve bank can increase its profits as long as it manages to issue further quantities of fiduciary money substitutes.[27] The banker knows that he may not exaggerate his issues, but he does not know where the limit is. If he does not venture to explore them then his competitors will.[28] Yet with each additional fiduciary issue the reserve ratio of the banks shrinks, and they become

[27] "Where competition enters into the problem between banks otherwise on equal footing, the bank which runs closest to the danger line in respect to the size of its metallic reserve without actually impairing public confidence will make the largest profits" (Conant 1905, pp.71f.; quoted in Skousen 1996, p. 38).

[28] Therefore, competiton between fractional-reserve banks "would . . . not hinder a slow credit expansion" (Mises 1998, p. 443). For the implications of this point see Skousen (1996, pp.136f.). While Mises championed fractional-reserve banking he did not do so here because he wanted the money supply to be flexibly adjusted to the "needs of trade." See on this point de Soto (1998).

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ever more vulnerable to unforeseen events. Eventually, the slightest deviation from what has been expected will suffice to bring about a collapse of the whole banking system.

Conscious toleration of fractional-reserve banks implies that a majority of the market participants has fallen prey to an illusion. However, sooner or later they must discover their error as in the case of the fraud-induced business cycle we discussed before. Hence, what we face here is a second type of business cycle. The first type, which covers the traditional Misesian or Austrian business cycle theory, corresponds to the commonsense observation that outright fraud must eventually be detected. This second type, by contrast, suggests a conclusion that we know from the analysis of socialism, namely, that unjust institutions cannot last forever. By the very logic of action, they must either grow and thus destroy society or be abolished in a crisis-like situation. The eventual crisis of unjust institutions may therefore be interpreted as being part of a long business cycle.[29]

The Illusion Cycle II: Central Banking and Option Clauses

Although an embezzler cannot avoid that the nature of his activities will sooner or later be detected, he can try to keep the show going for a while by extending the illusion on which his activity is based. This endeavour is central to the development of monetary institutions for the last three centuries. It has been aptly expressed by the term progression theorem.[30] The theorem states that the problems inherent in fractional-reserve banking cannot be solved by any technical devices like the pooling of money reserves, deposit insurance, option clauses for redemption, etc. These devices merely shift those problems to another level and, at the same time, make them even worse. The only real solution would be to abandon fractional-reserve banking altogether.

This is most obvious in the case of the pooling of money reserves. As it is not the bigger money pool but the pooling itself that benefits the banks, this technique brings only temporary relief. The individual banks now are capable of meeting demands for redemption that, before, would have depleted their vaults. However, access to a bigger money pool permits the banks to further increase their issues of fiduciary money substitutes. Sooner or later a limit will be reached again where the slightest wrong speculation of any major market participant causes bankruptcy of the whole banking system. The difference is that the losses incurred by the depositors will be much higher. Deposit insurance schemes principally have the same effect. What benefits the fractional-reserve banks (and what obscures for a while their inherent bankruptcy) is *not the insurance itself but its introduction*. Again, by a technical device, the banks may increase their issues beyond those limits that were set to them before. But once the new limits are reached, the old problem reappears on a larger scale. The supposed remedy proves to be a Trojan Horse.

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[29]See again Hoppe (1993b) and the literature quoted there. This gives also an excellent account of observations like the following one made by F.A. Hayek: "The one thing which, we will admit, has surprised me about the boom of the last twenty years is how long the effectiveness of resumed expansion in restarting the boom has lasted" (1983, p. 40). In fact, the difficulty that Hayek encountered stemmed from his attempt to explain the ongoing illusion cycle during the 1970s with the help of the traditional Misesian theory.

[30]The term has been coined by Salerno (1991, p. 371). For the content of the theorem see Rothbard (1990).

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Of course, the case is not different with option clauses. Here too it is not the option clause itself but its introduction that brings (temporary) relief. Yet, the advocates of fractional-reserve banking object that people might be willing to engage themselves in contracts providing for option clauses. This view, however, is entirely futile. It is absurd to call people willing to leave their money in bank accounts with option clauses "depositors." For what these people *in fact do* is *lend* their money to the banks for the time specified in the option clause. They are not depositors but lenders of money. If the option clause provides for three months then the money "deposited" is in fact a three-months credit. If the clause provides for nine months we have a nine-months credit. If no period is specified then the money on the deposit account is not credit at all but a gift to the bank. The crucial point is, however, that in either case the problem of fractional-reserve deposits remains untouched. If the market participants left their money in demand deposits covered by option clauses, then there would be no fractional-reserve banking at all. All transactions of the banks would then be pure credit transactions. But what about the money that the market participants desire to use in their current transactions? Do they have to keep it under their pillows? Or may they leave it with some banker? And, if they choose the latter, does the banker have to keep the entire amount or may he lend out parts of it? These questions still remain. Hence, considering the case for option clauses more closely one discovers that, as a matter of fact, it does not relate to fractional-reserve banking at all.

No pooling, no insurance, and no option clauses can undo the inherent bankruptcy of fractional-reserve banks. The so-called "problems" of the latter all boil down to this fact. The only way to solve these "problems of bankruptcy" is to recognize, first of all, that there *is* bankruptcy and then to liquidate the bankrupt enterprises and abolish the whole fractional-reserve system.

The Illusion Cycle III: Fiat Money

A final "solution" for the bankruptcy of a fractional-reserve bank is to permit it to refuse redemption of its fiduciary issues. This would be a clear violation of the property rights of its customers, to be sure, but this is not the point we have to deal with here. For our purposes the important fact is *that* a fiat currency may arise in this way. Through the breach of contract (and, by the way, *only* through the breach of contract) a money substitute may become a money. Moreover, it is evident that such an event can only happen if the members of society have fallen prey to an illusion about the real nature of this event. They must, for whatever reason (for example, because they think that government has to regulate money) believe that something else than mere aggression is at stake. We are faced with the question of whether an institution that is built on an illusion could persist on the free market, or whether sooner or later the illusion must fade away by the logic of action. The latter is indeed what reflection will show. We shall see that a fiat money sooner or later will be driven out of the market.[31]

Why is a currency driven out of the market? In general terms we might say, because the market participants discover that the employment of this currency is less useful than the employment of another currency. They do know a better

[31]The following analysis of currency competition revises in some respects the (consequentialist) argument in Hülsmann (1996b, pp. 255ff.).

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alternative. The utility of a currency surely depends on the facility with which it can be handled. Therefore, those currencies that are, by virtue of their physical qualities, most proper for indirect exchange will drive all other currencies out of the market (Menger 1976; 1985).

But what are the specific qualities of paper money (or, possibly, of electronic entries in an Internet account)? Let us first compare the use of fiat money with the use of metallic currencies on a free market. Here fiat money has one decisive disadvantage; namely, that it can be used only for a limited time and only for monetary purposes—at least if we abstract from such minor and destructive uses as papering walls or heating rooms. By contrast, metallic currencies can be used almost indefinitely and they always find other employments that do not prevent them from being used again as a medium of exchange. From this it follows for the competition between, for example, gold and a paper currency that gold can never be entirely driven out of the currency market, whereas the paper currency can. For even if gold were temporarily abandoned as a currency it would still have market prices per unit that would render its reintroduction as a currency worthwhile. On the other hand, once a paper currency is driven out of the market, its low commodity value would render any use as a currency impracticable. Thus, once driven out of the market, paper can never come back as a currency, whereas gold could do so very easily. This fact makes the use of paper currencies much more precarious than using gold. As soon as people realize this specific danger of the use of paper it is immediately abandoned as a currency. The ultimate failure of fiat money on the free market can be interpreted as the last phase of a very long business cycle.

However, the currency market today is no free market but a market in which governments intervene in favor of their paper currencies. Paper is legal tender and the only currency in which taxes may be paid, and the use of precious metals as currencies is systematically obstructed. There are sales taxes on gold and income taxes on yields from gold hoards; banks are not allowed to offer gold-based accounts; no private coinage is permitted; and it is very unlikely that contracts running in terms of gold would ever be enforced by government courts and police (Sennholz 1985, pp. 22ff., 80ff.; White 1989, p. 64). These government institutions keep paper monies in circulation. However, they also create unresolvable problems, which must sooner or later end up in a crisis. In fact, if a paper currency is firmly established on a market there is an irresistible temptation to use it for the only purpose it specifically serves; namely, to finance government and to bail out bankrupt market participants. Let us focus on the latter possibility. Because the market participants know that they can be bailed out, at least the bigger firms will incur undue risks in their operations. Benefitting from zero-cost assurance, they have a systematic incentive to overstep the boundaries of sound business and reap additional profits without the risk of incurring losses. A small firm, it is true, might go bankrupt without danger for the political establishment. But the bankruptcy of a big corporation will not go without public protest and pressures for help. Thus, the very possibility to bail out some people brings about situations in which bailouts are dearly needed. Having established a paper currency, the government faces the challenge to bail out major parts, and possibly the whole, of the national economy. This challenge cannot possibly be met without leading to hyperinflation and economic breakdown. There is but one recourse left—to regulate the operations of the firms. But this intervention prevents a rational allocation of resources. The

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more businesses are regulated the more it becomes impossible for the entrepreneurs to discern the most-needed, and thus most-profitable, investments. It becomes more and more impossible to maintain, or extend, the present structure of production. The economy turns down. Again, we have ultimate failure at the end of a very long business cycle.

In conclusion, let us emphasize that the use of money is an essential feature of any civilization. Monetary approaches to business cycle theory, and especially the Austrian one, have been most successful. Our analysis has stressed two major shortcomings of this approach. The first one is that the formulation of the theory is not general enough. Any business cycle theory must be grounded in a general theory of error. Second, the tacit general theory underlying the traditional business cycle theory is fallacious as it tries to explain error as a consequence of preceding events. By contrast, we have tried to show how a general theory of error cycles can be developed along essentialist lines. Recurrent clusters of errors can be deduced from the existence of government activities. This is because the latter can be interpreted as manifestations of error—which sooner or later will lead to crises. There are many specific error cycles: the monetary business cycle, the military-imperialistic cycle, the social security cycle, etc.

As a by-product, our analysis provides a clearcut answer to a question that has plagued Austrian business cycle theory for a long time. If it were true that an increase in the quantity of money *per se* would set in motion the trade cycle then this would hold true for increases of the quantity of specie as well. Thus, even on the free market there would be a built-in source of business cycles calling for some remedy—possibly through government intervention. However, we have seen that the Austrian business cycle theory does not need to rely upon such an account. It does not have to claim that recurrent clusters of error stem from monetary changes. Rather, they can be deduced entirely from a constant feature of modern societies; most importantly, the existence of governments. It is not money but government intervention that accounts for the business cycle.

REFERENCES

Baader, Roland. 1997. *Fauler Zauber - Schein und Wirklichkeit des Sozialstaats*. Gräfelfing: Resch.

Bastiat, Frédéric. [1850] 1983. "La loi." *Oeuvres économiques*. Florin Aftalion, ed. Paris: Presses Universitaires de France.

———. [1848] 1986. "Propriété et loi." *Les libéraux*. Pierre Manent, ed. Vol. 2. Paris: Hachette.

de La Boétie, Étienne. [1562] 1993. *De la servitude volontaire ou Contr'un*. Paris: Gallimard.

Conant, Charles A. 1905. *The Principles of Money and Banking*. Vol. 2. New York: Harper. Quoted in Skousen 1966.

Condillac, Étienne Bonnot de Mably de. 1795. *Le commerce et le gouvernement*. Paris.

Cantor, Paul A. 1994. "Hyperinflation and Hyperreality: Thomas Mann in the Light of Austrian Economics." *Review of Austrian Economics* 7, no. 1:3-29.

Eucken, Walter. [1939] 1989. *Grundlagen der Nationalökonomie*. 9th ed. Berlin: Springer Verlag.

Garrison, Roger W. 1989. "The Austrian Theory of the Business Cycle in the Light of Modern Macroeconomics." *Review of Austrian Economics* 3:3-29.

———.1991. "New Classical and Old Austrian Economics: Equilibrium Business Cycle Theory in Perspective." *Review of Austrian Economics* 5, no. 1:91-103.

Grinder, Walter, and J. Hagel III. 1977. "Toward a Theory of State Capitalism: Ultimate Decision-Making and Class Structure." *Journal of Libertarian Studies* 1, no. 1.

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ELECTRONIC REPRODUCTION PROHIBITED

Hayek, Friedrich A. 1929. *Geldtheorie und Konjunkturtheorie*. Vienna: Gustav Fischer.

———. 1931. *Prices and Production*. London: Routledge.

———. 1939. "Price Expectations, Monetary Disturbances, and Malinvestments." *Profits, Interest, and Investment*. London: Routledge.

———. 1983. "Can We Still Avoid Inflation?" In *The Austrian Theory of the Trade Cycle and Other Essays*. Auburn, Ala.: Ludwig von Mises Institute.

Higgs, Robert. 1987. *Crisis and Leviathan*. New York: Oxford University Press.

Hoppe, Hans-Hermann. 1983. *Kritik der kausalwissenschaftlichen Sozialforschung*. Opladen: Westdeutscher Verlag.

———. 1987. *Eigentum, Anarchie und Staat*. Opladen: Westdeutscher Verlag.

———. 1989. *A Theory of Socialism and Capitalism*. Boston: Kluwer.

———. 1993a. *The Economics and Ethics of Private Property*. Boston: Kluwer.

———. 1993b. "Marxist and Austrian Class Analysis." In Hoppe 1993a.

———. 1993c. "Banking, Nation States, and International Politics: A Sociological Reconstruction of the Present Economic Order." In Hoppe 1993a.

———. 1996. "Socialism: A Property or Knowledge Problem?" *Review of Austrian Economics* 9, no. 1:143–49.

———. 1997. "On Certainty and Uncertainty, or: How Rational Can Our Expectations Be?" *Review of Austrian Economics* 10, no. 1:49–78.

Hume, David. [1777] 1987a. *Essays*. Indianapolis, Ind.: Liberty Press.

———. [1777] 1987b. "Of the First Principles of Government." In Hume [1777] 1987a.

Hülsmann, Jörg Guido. 1996a. "Free Banking and the Free Bankers." *Review of Austrian Economics* 9, no.1:3–53.

———. 1996b. *Logik der Währungskonkurrenz*. Essen: Management Akademie Verlag.

———. 1997. "Knowledge, Judgment, and the Use of Property." *Review of Austrian Economics* 10, no. 1:23–48.

de Jouvenel, Bertrand. [1945] 1972. *Du Pouvoir*. Paris: Hachette.

———. 1996. *Logik der Währungskonkurrenz*. Essen: Management Akademie Verlag.

Klein, Peter G. 1996. "Economic Calculation and the Limits of Organization." *Review of Austrian Economics* 9, no. 2:3–28.

Knight, Frank H. 1921. *Risk, Uncertainty, and Profit*. Chicago: University Chicago Press.

Krippendorf, E. 1985. *Staat und Krieg*, Frankfurt/M.: Suhrkamp.

Lachmann, Ludwig. 1943. "The Role of Expectations in Economics as a Social Science." *Economica* 14:108ff.

Lucas, Robert E. 1987. *Models of Business Cycles*. New York: Basil Blackwell.

Menger, Carl. 1976."Time and Error." *Principles of Economics*. Trans. by James Dingwall and Bert F. Hoselitz. New York: New York University Press.

———. [1883] 1985. *Investigations into the Method of the Social Sciences with Special Reference to Economics*. Trans. by Francis J. Nock. New York: New York University Press.

Mises, Ludwig von. 1928. *Geldwertstabilisierung und Konjunkturpolitik*. Vienna: Gustav Fischer.

———. 1940. *Nationalökonomie*. Geneva: Éditions Union.

———. 1943. "'Elastic Expectations' and the Austrian Theory of the Business Cycle." *Economica* NS 10, no. 10:251.

———. [1929] 1977. *A Critique of Interventionism*. New Rochelle, N.Y.: Arlington House.

———. 1980a. *Planning for Freedom*. 4th ed. South Holland, Ill.: Libertarian Press.

———. 1980b. "Profit and Loss." In Mises 1980a.

———. 1980c. "Wages, Unemployment, and Inflation." In Mises 1980a.

———. [1912] 1981. *The Theory of Money and Credit*. Indianapolis, Ind.: Liberty Fund.

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———. [1949] 1998. *Human Action: A Treatise on Economics.* Auburn, Ala.: Ludwig von Mises Institute.

de Molinari, Gustave. 1849. "De la production de la sécurité." *Journal des Économistes* 22.

Nock, Albert J. [1935] 1994. *Our Enemy, The State.* San Francisco: Fox and Wilkes.

Oppenheimer, Franz. [1907] 1990. *Der Staat.* Berlin: Libertad.

Revel, Jean-François. 1992. *Le regain démocratique.* Paris: Fayard.

Rothbard, Murray N. 1978. *For A New Liberty: The Libertarian Manifesto.* 2nd ed. New York: Macmillan.

———. [1963] 1983. *America's Great Depression.* 4th ed. New York: Richard and Snyder.

———. 1982. *The Ethics of Liberty.* Atlantic Highlands, N.J.: Humanities Press. Reprinted in 1998 by New York University Press.

———. [1963] 1990. *What Has Government Done to Our Money?* Auburn, Ala.: Ludwig von Mises Institute.

———. 1991. *The Case for a 100 Percent Gold Dollar.* Auburn, Ala.: Ludwig von Mises Institute.

———. [1962] 1993. *Man, Economy, and State.* 3rd ed. Auburn, Ala.: Ludwig von Mises Institute.

Salerno, Joseph T. 1990. "Ludwig von Mises as a Social Rationalist." *Review of Austrian Economics* 4:26–54.

———. 1991. "Two Traditions in Modern Monetary Theory." *Journal des Économistes et des Études Humaines* 2, no 2/3.

———. 1993. "Mises and Hayek Dehomogenized." *Review of Austrian Economics* 6, no. 2:113–46.

———. 1995. "Ludwig von Mises on Inflation and Expectations." *Advances in Austrian Economics* 2b:307ff.

Schultz, T.W. 1975. "The Value of the Ability to Deal With Disequilibria." *Journal of Economic Literature* 13, no. 3:827ff.

Selgin, George A. 1990. *Praxeology and Understanding.* Auburn, Ala.: Ludwig von Mises Institute.

Sennholz, Mary. 1985. *Money and Freedom: Essays in Honor of Ludwig von Mises.* Spring Mills, Penn.: Libertarian Press.

Shmanske, Stephen. 1994. "On the Relevance of Policy to Kirznerian Entrepreneurship." *Advances in Austrian Economics* 1.

Skousen, Mark. [1977] 1996. *Economics of a Pure Gold Standard.* 3rd ed. Irvington-on-Hudson, N.Y.: Foundation for Economic Education.

Spencer, Herbert. [1884] 1981. *The Man Versus the State.* Indianapolis, Ind.: Liberty Fund.

———. [1851] 1995. *Social Statics.* Reprint by Schalkenbach Foundation.

de Soto, Jesús Huerta. 1994. *Estudios de Economía Política.* Madrid: Unión Editorial.

———. 1998. "A Critical Note on Fractional-Reserve Banking." *Quarterly Journal of Austrian Economics* 1, no. 4 (Winter): 25–49.

Wieser, Friedrich. 1924. *Theorie der gesellschaftlichen Wirtschaft.* 2nd ed. Tübingen: Mohr.

———. 1926. *Das Gesetz der Macht.* Vienna: Julius Springer.

White, Lawrence H. 1989. *Competition and Currency.* New York: New York University Press.

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A Critical Note on Fractional-Reserve Free Banking

Jesús Huerta de Soto

Over the last fifteen years there has been a revival of some of the economic doctrines of the old Free-Banking School. Supporters of this revival defend the idea that fractional-reserve free banking would not only lead to fewer distortions and financial crises than those generated by the current central banking system, but would also tend to eliminate economic recessions. We will group these theorists together under the name of the Fractional-Reserve Free-Banking School.[1] This School is formed by a coalition of theorists with heterogeneous origins.[2] Thus, its components include distinguished members of the Austrian School, such as White (1984; 1993),[3] Selgin (1987; 1988; 1994) and, more recently, Horwitz (1989; 1992; 1994), members of the English Subjectivist School, like Dowd (1989; 1993a,b), and, lastly, monetarists like Glasner (1989; 1992), Yeager (1983; 1986), and Timberlake (1984; 1987; 1989). Even Milton Friedman (Friedman and Schwartz 1986), although he cannot be considered part of this new School, has gradually been leaning towards it, mostly after his disappointment on seeing the failure of the central banks when putting his well-known monetary rule proposal into practice.

Furthermore, some modern theorists of the Fractional-Reserve Free-Banking School, led by Selgin, have proposed a theory of money supply under free banking that, using the analytical framework of monetary equilibrium-disequilibrium developed by the Monetarist and Keynesian Schools during the first third of the present

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[1]We consider that the classification into four schools—Banking School: Free or Central *and* Currency School: Free or Central—by Vera C. Smith (1990, pp. 144–45) is more accurate and provides greater clarification than the classification into only three schools proposed by Anna J. Schwartz (1992, pp. 148–52). Given that, according to Smith, the great majority of Banking School theorists—with the sole exceptions of Tooke, Bonamy Price, Cairnes, and Collet—also defended a system of complete banking freedom, it could be considered not completely inaccurate to call the modern Free-Banking School the Neobanking School.

[2]As Laidler (1992, pp. 196–97) points out, the recent interest in free banking and the development of the Fractional-Reserve Free-Banking School stems from Hayek (1978). Before Hayek, Klein (1974) had made a similar proposal.

[3]See also Selgin and White (1994; 1996). In addition White (1993) has, in three volumes, compiled the most important works of the School.

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century,[4] aims to show that fractional-reserve free banking would merely adjust the creation of fiduciary media (bank notes and deposits) to public demand for them. Thus, they argue that fractional-reserve free banking would tend to achieve a "monetary equilibrium" better than other alternative systems, as it would adapt the supply of money to its demand more efficiently.

In simplified terms, this argument is based on considering what happens if there is an increase in the demand for fiduciary media by the economic agents, assuming an unchanging supply of bank reserves of commodity money (Selgin 1988, p. 34).[5] The reasoning is that, if this occurs, the flow of the exchange of fiduciary media for the reserves of the banks will decrease, meaning that the latter will increase and the banks, eager to obtain higher profits and aware that they now need less "prudential" reserves, will expand credit and the issue of bank notes, giving rise to an increase in the issue of fiduciary media that will tend to respond and adapt itself to the *previous* increase in the demand for them. The contrary occurs in the event of a decrease in the demand for fiduciary media: the economic agents will increase the flow of the exchange of fiduciary media for bank reserves, meaning that the banks will feel their solvency threatened and will be forced to reduce credit and decrease the issue of deposits and bank notes. Thus, the decrease in the supply of fiduciary media will follow the *previous* decrease in the demand for them.

This analysis of monetary equilibrium is reminiscent of some arguments of the old Banking School concerning the needs of trade. According to these arguments, the creation of fiduciary media by private banks would not be harmful if it responded to an increase in the "needs" of the traders.[6] According to the new theory of "monetary equilibrium" in free banking, the creation of fiduciary media (bank notes and deposits) by private banks will not generate economic cycles because *it will only tend to respond to an increase in the demand for such instruments on the part of the public.* Although the embryo of this new and refined version of the "needs of trade" theory had already been set forth in White's book, *Free Banking in Britain*,[7] it was nevertheless not developed by this author, but by one of his most distinguished students, George A. Selgin. We will now make a critical study of Selgin's theory of "monetary equilibrium" under free banking and, in general, of fractional-reserve free banking.

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[4]Selgin also includes Haberler (1931), Machlup (1940), and, with qualifications, Hayek (1935) among the continental European theorists who also upheld the analytical framework of monetary equilibrium. Regarding Keynes, Selgin (1988, pp. 56 and 59) concludes that "Despite . . . important differences between Keynesian analysis and the view of other monetary-equilibrium theorists, many Keynesians might accept the prescription for monetary equilibrium offered" in his book.

[5]Ibid. (chs. 4, 5, and 6, and esp. pp. 64–69) for a detailed analysis of this theory.

[6]In fact, these and other banking doctrines had already been set forth at an embryonic stage by the anti-bullionist theorists of eighteenth-century Great Britain. See Rothbard (1995b,c,d) and Hayek (1991).

[7]According to Horwitz, White

> expressly rejects the real-bills doctrine and endorses a different version of the "needs of trade" idea. For him the "needs of trade" means *the demand to hold bank notes.* On this interpretation, the doctrine states that the supply of bank notes should vary in accordance with the demand to hold notes. This is just as acceptable as the view that the supply of shoes should vary to meet the demand for them. (Horwitz 1994, p. 169)

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THE CONSIDERATION OF THE CHANGE IN THE DEMAND FOR FIDUCIARY MEDIA AS AN EXOGENOUS VARIABLE

The modern fractional-reserve free-banking theorists base their analysis on considering that the demand for money in the form of fiduciary media is a variable which is exogenous to the system and increases or decreases at the will of the economic agents. Therefore, for Selgin and White, the main virtue of the free-banking system is that it adapts the issue of deposits and bank notes to the increases and decreases in the demand for them.[8] *However, this demand would not always be exogenous to the free-banking system, but could be determined endogenously by the system itself.*

It is understandable that the theorists of the Fractional-Reserve Free-Banking School usually begin their monetary equilibrium analysis by assuming that there have been sudden variations in the demand for fiduciary media, the origin and etiology of which they rarely explain.[9] It is as if they were aware that, on the supply side, the Austrian analysis has demonstrated that credit expansion causes important distortions of the economy which seem to justify a rigid monetary system[10] that prevents the monetary expansions and contractions generated by their fractional-reserve free-banking system. On the monetary supply side, therefore, it seems that the theoretical arguments of the Austrians support the establishment of a relatively inelastic monetary system such as the pure gold standard with a 100-percent reserve requirement for bank demand deposits.[11] Consequently, it is easy to understand that anyone who wants to justify theoretically a fractional-reserve free-banking system that may

[8]"Free banking thus works against short-run monetary disequilibrium and its business cycle consequences" (Selgin and White 1996, pp. 101–2).

[9]It is curious to observe how the modern theorists of the Free-Banking School, like the Keynesians and the monetarists, seem obsessed by short-term unilateral changes in the demand for money. However, such changes historically have been produced over an economic cycle—during the last stages of booms and in crises—which almost always begins as the result of *previous* changes in the supply of new money created by the banking system. Apart from this, only exceptional disasters like wars and other catastrophes—natural or otherwise—could explain a sudden increase in the demand for money. Seasonal variations in the demand for money are comparatively of minor importance and a 100-percent-reserve free-banking system could easily adjust to them through some seasonal movements of gold and variation of prices. Moreover, for Mises, increases in the demand for money do not pose any problem of coordination, even if the banks do not try to adapt themselves by creating new credits. Thus, even in the event of an increase in savings (in other words, a decrease in consumption) which materializes entirely in an increase in cash balances—hoarding—and not in direct loans in the form of capital-goods expenditure, there will be effective saving of the community's goods and services and a process whereby the productive structure will lengthen and become more capital intensive. If this occurs, the increase in cash balances will simply give rise to an increase in the purchasing power of money and, therefore, to a decrease in the nominal prices of consumer goods and the services of the different production factors which will generate among themselves, in relative terms, the price disparities which are typical of a period in which savings grow and the structure of production becomes more capital intensive. See Mises (1998, pp. 520–23) and also the corresponding comment by Salerno (1993).

[10]Hayek (1967, p. 108) wrote that, in order to be neutral, "the supply of money should be invariable." Remember also that Hayek's goal in *Prices and Production* was "to demonstrate that the cry for an 'elastic' currency which expands or contracts with every fluctuation of 'demand' is based on a serious error of reasoning" (1931, p. xiii).

[11]Skousen notes how a 100-percent free-banking system and pure gold standard is more elastic than Hayek's proposal and does respond to the "needs of business": price deflation would stimulate new gold discoveries and would eventually cause an expansion in the gold-money supply without creating a boom-bust cycle. Skousen (1990, p. 359) concludes that "based on historical evidence, the money supply (the stock of gold) under a pure gold standard would expand between 1 to 5 percent. And, most importantly, there would be virtually no chance of a monetary deflation under 100-percent gold backing of the currency."

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give rise to significant increases and decreases in the supply of fiduciary media must inevitably resort to the monetary demand side of the problem, in the hope of being able to show that, when these modifications in the fiduciary media supply occur (and they will, in a fractional-reserve free-banking system), it is because they always satisfy *prior* and entirely independent variations in the demand for them. Thus, a hypothetical "monetary equilibrium," which existed previously and had been altered by an exogenous variation in the demand for fiduciary media, would be reestablished.

However, the evolution of events may often be different from what these theorists indicate. It could begin, not with autonomous or original movements in the demand for fiduciary media, but rather in the manipulation of the monetary supply (credit expansion) which, to a variable extent, all fractional-reserve free-banking systems can generate autonomously and exogenously. These increases in credit expansion will distort the productive structure and provoke an economic cycle which leads to sudden variations in the demand for money and fiduciary media, especially during the last stages of each boom and during the periods of crisis and recession.

It is true that, if there exist many free banks that are not supported by a central bank, credit expansion will cease long before it would in an environment in which the central bank orchestrated and drove it, and also used its liquidity to support any banks which might be in danger. This is the main argument in favor of fractional-reserve free banking originally developed by Parnell (1827) and also later considered as a *second-best* by Mises.[12] However, it is one thing to affirm that completely free banking will limit the credit expansion *earlier*, and quite a different one to say that in no case will the credit expansion generated by a fractional-reserve free-banking system distort the productive structure because it will only tend to reestablish a hypothetical "monetary equilibrium." In fact, Mises himself makes it very clear that *all* credit expansion distorts the productive system, thus rejecting the essence of the modern theory of monetary equilibrium. Mises states that "the notion of 'normal' credit expansion is absurd. *Issuance of additional fiduciary media, no matter what its quantity may be, always sets in motion those changes in the price structure the description of which is the task of the theory of the trade cycle*" (Mises 1998, p. 442; emphasis added).[13]

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[12]"Mises's support for free banking is based in part on his agreement with Cernuschi, who (along with Modeste) believed that freedom of note issue would automatically lead to 100-percent reserve banking" (Selgin 1988, p. 62) and that Mises "believed that free banking will somehow lead to the suppression of fractionally-based inside monies" (ibid., p. 164). A different interpretation of Mises's position has been given by White (1992, pp. 517–33). Salerno criticizes White for defending the thesis that Mises was the prototype of the modern Fractional-Reserve Free-Banking-School theorists without realizing that Mises always criticized the essential positions of the Banking School and that, if he defended free banking, it was as an indirect procedure for attaining the final goal of a banking system with a 100-percent reserve requirement. Salerno concludes that

> To the extent that Mises advocated the freedom of banks to issue fiduciary media, he did so only because his analysis led him to the conclusion that this policy would result in a money supply strictly regulated according to the Currency Principle. Mises's desideratum was to completely eliminate the destructive influences of fiduciary media on monetary calculation and the dynamic market process. (Salerno 1993, pp. 137ff. and 146)

[13]Mises adds that "Free banking . . . would not hinder a slow credit expansion" (1998, p. 443). We think that Mises was, in *Human Action*, probably too optimistic when evaluating the role of free

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The theory of monetary equilibrium under fractional-reserve free banking does not recognize that the *supply of fiduciary media can generate, to a large extent, its own demand*. In other words, the modern free-banking theory shares the essential error of the old Banking School which stems, as Mises showed, from not having realized that the credit demand from the public is a magnitude which depends precisely on the banks' willingness to lend. Thus, banks which are not too concerned about their future solvency are in a situation where they can expand credit and place new fiduciary media in the market simply by reducing the interest they ask on the new loans they create and making easier the other contractual conditions they normally require for granting their new credits.[14] Moreover, the increase in money to which the credit expansion gives rise tends, at least during an initial period, to increase the demand for fiduciary media. In fact, those economic agents who are not entirely aware that an inflationary process of expansion has commenced will see how the prices of certain goods and services start to rise relatively faster and, maintaining the hope that these prices will have to return to their "normal" level, will probably decide to increase their demand for fiduciary media. To quote Mises again, while the first stage of this inflationary process lasts,

> the prices of many goods and services are not yet adjusted to the altered money relation. There are still people in the country who have not yet become aware of the fact that they are confronted with a price revolution which will finally result in a considerable rise of all prices, although the extent of this rise will not be the same in the various commodities and services. These people still believe that prices one day will drop. Waiting for this day, they restrict their purchases and concomitantly increase their cash holdings. (Mises 1998, pp. 427–28)

Therefore, it is not only that the banks of a real fractional-reserve free-banking system can initiate a credit expansion unilaterally; also, over significant periods of time, the increase in the supply of fiduciary media can produce an increase in its own demand, which will last until the public understands and begins to distrust the situation of economic boom and realizes that there is going to be a general price rise. Afterwards, during the last stages of the boom and when confidence is shaken during the recession, people can also tend to increase their demand for bank money.

We may conclude that if the origin of the changes in the demand for money is in the free banking supply of fiduciary media, the essential foundation of the theory of monetary equilibrium under fractional-reserve free banking, according to which the supply of fiduciary media simply adjusts itself to the demand for them,

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banking in limiting credit expansion. Mises in 1924, however, with the second German edition of his book *The Theory of Money and Credit* already had stated that "it is clear that banking freedom *per se* cannot be said to make a return to gross inflationary policy impossible" (1981, p. 436).

[14] See Mises (1998, pp. 439–40):

> The Banking School failed entirely in dealing with these problems. It was confused by a spurious idea according to which the requirements of business rigidly limit the maximum amount of convertible banknotes that the bank can issue. They did not see that the demand of the public for credit is a magnitude dependent on the banks' readiness to lend, and that the banks which do not bother about their own solvency are in a position to expand circulation credit by lowering the rate of interest below the market rate. . . . Lowering the rate of interest is tantamount to increasing the quantity of what is mistakenly considered as the fair and normal requirements of business.

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disappears. In fact, it could be the demand for fiduciary media which, at least for significant time periods, tends to adjust itself to the greater monetary supply generated by the banks in the form of credits.

POSSIBLE SOURCES OF UNILATERAL CREDIT EXPANSIONS IN REAL FRACTIONAL-RESERVE FREE-BANKING SYSTEMS

There are several reasons that may make it possible for a real fractional-reserve free-banking system to generate credit expansions that do not correspond to previous variations in the demand for fiduciary media.

First, the analysis of monetary equilibrium in a free-banking system shares many of the limitations of the traditional neoclassical analysis which, in both the microeconomic and macroeconomic fields, merely explains how a hypothetical final state of rest of the social processes (monetary equilibrium) is reached as a result of the strictly maximizing behavior of the economic agents (private bankers). The Austrian economic analysis, on the other hand, places the emphasis on the dynamic entrepreneurial process that is continually taking place in the market, rather than on equilibrium. Each entrepreneurial act serves to coordinate and establish a *trend* towards equilibrium which, however, is never reached because, during this process, new information is continually generated by the entrepreneurs and other changes in market circumstances occur, making it impossible to attain. Applying this well-known theoretical scheme of the dynamic entrepreneurial process studied by the Austrians to the model of monetary equilibrium, it is clear that, in a real fractional-reserve free-banking system, a perfect adjustment between the issue of fiduciary media and the demand for them, included so mechanically in the model, cannot be accepted, except in a very imperfect and, at most, approximate way.

In real life, many banking entrepreneurs, each of whom has his own personal alertness, subjective interpretation of the information from the external world (including the evaluation, optimistic or otherwise, of the evolution of economic events, of what may be considered to be a prudent level of reserves and of his own solvency) and entrepreneurial creativity, will make day-to-day decisions on the volume of fiduciary media to be issued in an environment of ineradicable uncertainty. It is obvious that many errors will be committed during this entrepreneurial process in the form of unilateral issues of fiduciary media that distort the real productive economy. The truth is that errors will tend to be discovered and eliminated, but only over a prolonged process, which may last a longer or shorter time, during which certain volumes of fiduciary media will be produced by error and will cause *real* damage to the productive structure. If to this we add the intimate relations that exist between the supply of fiduciary media and the demand for them by the public, mentioned under the preceding heading, we can understand the great problem posed in order to reach monetary equilibrium in the real world of fractional-reserve free banking: the banking entrepreneurs, through a trial and error process, will try to adapt their issue of fiduciary media to a demand that, first, they do not know and, second, tends, in turn, to vary as a consequence of the inevitable errors committed by the bankers in the form of "undue issues" of fiduciary media during the adjustment process. It is debatable, and will depend, above all, on the historical circumstances in each particular case, whether, in fact, the bankers' entrepreneurial process of coordination will converge in the direction of some equilibrium; but what cannot, in our opinion, be denied is that, at least during the coordination process, errors will be committed, fiduciary media

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will be unduly issued in the form of a credit expansion, and the productive structure will be distorted, as shown by the Austrian theory of economic cycles (Hülsmann 1996, esp. pp. 40–41).

The same may be said, in the second place, with regard to the possibilities of the "in-concert" expansion of fiduciary media arranged *simultaneously* by a larger or more reduced group of bankers, or with regard to the chances that mergers or acquisitions take place among the free banks, in order to "pool" and better manage the "prudential" reserves they hold, thus increasing their capacity to create fiduciary media in order to raise their profits (Laidler 1992, p. 197). Unless the advocates of a free-banking system wish to avoid the adoption of those types of entrepreneurial strategies by applying strict antitrust legislation in the banking industry (which we doubt), it seems possible that this kind of phenomenon will often commence in a fractional-reserve free-banking system. In relation to the prearranged expansion, Selgin argues that the "spontaneous in-concert expansions will be self-correcting" because the growth in total clearings will increase the *variance* of clearing debits and credits (Selgin 1988, p. 82). However, apart from the fact that, in his model, Selgin always assumes a fixed amount of banking reserves and that a number of authors doubt that this mechanism is effective (Schwartz 1993, p. 3), even if, for dialectical purposes, we suppose that Selgin is right, it may again be argued that the adjustment would never be perfect or immediate and that, during their readjustment and coordination process, in-concert expansions and mergers might facilitate the unilateral issue of significant volumes of new fiduciary media which might give rise to an economic cycle.

Finally, in the third place, a fractional-reserve free-banking system leads to unilateral increases in the issue of fiduciary media that do not correspond to previous increases in the demand for them when an increase in the global stock of commodity money (gold) used by the banks as prudential reserves takes place. If we remember that, historically, the worldwide stock of gold has increased at an annual rate of between 1 and 5 percent (Skousen 1990, ch. 8, pp. 269 and 359), it is clear that a free-banking system could permit, even if it were only as a consequence of the annual worldwide gold production, a significant growth (also between 1 and 5 percent annually) in the issue of fiduciary media that does not originate from an increase in the demand for them.[15]

We may, therefore, conclude that, even in a fractional-reserve free-banking system, significant inflationary processes[16] and serious economic crises[17] may take place.

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[15]The possibility of greater credit expansions induced by commodity-money supply shocks should not be discarded either, although Selgin (1988, pp. 129–33) tends to minimize its importance.

[16]We should remember (note 13 above) that, for Mises, "It is clear that banking freedom *per se* cannot be said to make a return to gross inflationary policy impossible," especially if an inflationary ideology prevails in the economic world:

> Many authors believe that the instigation of the banks' behavior comes from outside, that certain events induce them to pump more fiduciary media into circulation and that they would behave differently if these circumstances fail to appear. I was also inclined to this view in the first edition of my book on monetary theory. I could not understand why the banks didn't learn from experience. I thought they would certainly persist in a policy of caution and restraint, if they were not led by outside circumstances to abandon it. Only later did I become convinced that it was useless to look for an outside stimulus for the change in the conduct of

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THE THEORY OF "MONETARY EQUILIBRIUM" IN FRACTIONAL-RESERVE FREE BANKING IS BASED ON AN EXCLUSIVELY MACROECONOMIC ANALYSIS

Attention should be drawn to the fact that the modern analysis of monetary equilibrium in a fractional-reserve free-banking system ignores the *microeconomic* effects which arise from the increases and decreases in the supply of fiduciary media generated by the banking system. In other words, even accepting, for dialectic purposes, that the origin of all evil is, as the fractional-reserve free-banking theorists assume, unexpected changes in the demand for bank money by the economic agents, it is evident that the fiduciary media supply generated by the banking system to accommodate these changes in the money demand do not arrive instantaneously at the precise economic agents whose valuations in respect to holding new fiduciary media have been modified. They rather flow into the market through very specific points and in a very precise way: step-by-step in a temporal process and in the form of credits granted by reducing interest rates and received, in the first place, by certain entrepreneurs and investors who thus tend to initiate new investment projects which distort the structure of production.

It is not surprising, therefore, that the modern theorists of the Fractional-Reserve Free-Banking School tend to ignore some essential elements of the Austrian theory of economic cycles. This Austrian theory is difficult to fit into their analysis of the issue of fiduciary media in a fractional-reserve free-banking system. This is because they normally take refuge in an exclusively macroeconomic analysis and use instruments which, like the equation of exchange or the concept of price level, tend precisely to conceal the important microeconomic phenomena which take place in an economy when there is credit expansion and the amount of fiduciary media changes (variation in relative prices and intertemporal discoordination).

In normal market processes, the supply of consumer goods and services tends to vary in accordance with the demand for them and the new production of these types of goods tends to reach precisely the consumers whose subjective valuation of them has increased. However, the situation in relation to fiduciary media is very different: the supply of fiduciary media generally does not go immediately and *directly* into the pockets of the economic agents whose demand for them may have increased, but reaches them after a long process, having previously passed through the pockets of many other economic agents, distorting the whole productive structure during this long transitional phase.

When the fractional-reserve free bankers create new fiduciary media, they do not hand them directly to the economic agents that feel a greater demand for bank

> the banks. . . . We can readily understand that the banks issuing fiduciary media, in order to improve their chances for profit, may be ready to expand the volume of credit granted and the number of notes issued. What calls for special explanation is why attempts are made again and again to improve general economic conditions by the expansion of circulation credit in spite of the spectacular failure of such efforts in the past. The answer must run as follows: according to the prevailing ideology of businessman and economist-politician, the reduction of the interest rate is considered an essential goal of economic policy. Moreover, the expansion of circulation credit is assumed to be the appropriate means to achieve this goal. (Mises, 1978, pp. 135–36)

[17] "Crises have reappeared every few years since banks began to play an important role in the economic life of people" (ibid., p. 134).

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money. They grant credits to entrepreneurs, who receive and *invest them entirely* without taking any account at all of the proportion at which the final holders of the new fiduciary media desire to consume and invest. And thus, it is very possible that, if social preferences on consumption and investment have not changed, the new fiduciary media created by the banks to offset the already increased demand for bank money, will at least be partially *used to increase consumer goods* expenditures, forcing the relative prices of these types of goods to rise. As Hayek says,

> so long as any part of the additional income thus created is spent on consumers' goods (i.e., unless all of it is saved), the prices of consumers' goods must rise permanently in relation to those of various kinds of input. And this, as will by now be evident, cannot be lastingly without effect on the relative prices of the various kinds of input and on the methods of production that will appear profitable. (Hayek 1976, p. 378)

Hayek further clarifies our position when he concludes that

> All that is required to make our analysis applicable is that, when incomes are increased by investment, the share of the additional income spent on consumers' goods during every period of time should be larger than the proportion by which the new investment adds to the output of consumers' goods during the same period of time. And there is of course no reason to expect that more than a fraction of the new income [created by credit expansion], and certainly not as much as has been newly invested, will be saved, because this would mean that practically all the income earned from the new investment would have to be saved. (Ibid., p. 394)[18]

In order to illustrate our argument, we will assume that there is an increase in the demand for fiduciary media without any variation in the proportion in which the economic agents wish to consume or invest.[19] If these conditions exist, the economic agents will be forced to reduce their monetary demand for consumer goods, to sell bonds and investment assets and, above all, to decrease their reinvestment in the different stages of the process of production, until they are able to accumulate the higher volume of bank money desired. We assume that the time preference has not varied, using Hayek's well-known triangular diagrams (Hayek 1967, pp. 32–62; Skousen 1990, pp. 133–214) to describe the changes that have taken place in the productive structure. We see, in Figure 1, how the increase in the demand for fiduciary media causes the hypotenuse of the triangle to move to the left, which indicates that there is a lower monetary demand for consumption and investment, although the proportion between them remains intact. In this figure, area A represents the new "hoarding" of fiduciary media by individuals.

The essential conclusion of the theory of monetary equilibrium in a fractional-reserve free-banking system is that the banks will respond to the increase that takes place in the demand for fiduciary media by expanding them by an identical volume (represented by area A) to that which will leave the productive structure intact, as shown in Figure 2.

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[18]This seems to be the extreme case of the increase in saving, all of which materializes in new holdings, of bank money used by Selgin and White to illustrate their theory. See Selgin and White (1996, pp. 104–5).

[19]This hypothesis is perfectly possible, as Selgin and White (ibid., p. 104) themselves recognize when they say that "An increase in *savings* is neither necessary nor sufficient to warrant an increase in fiduciary media."

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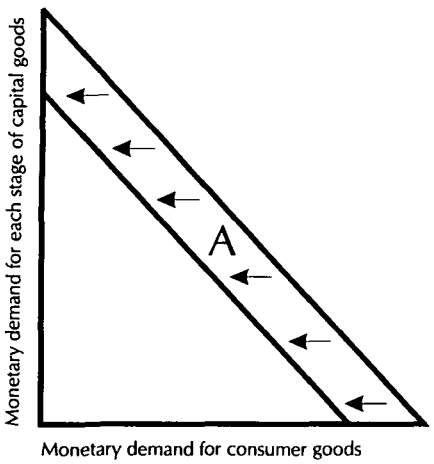

Figure 1

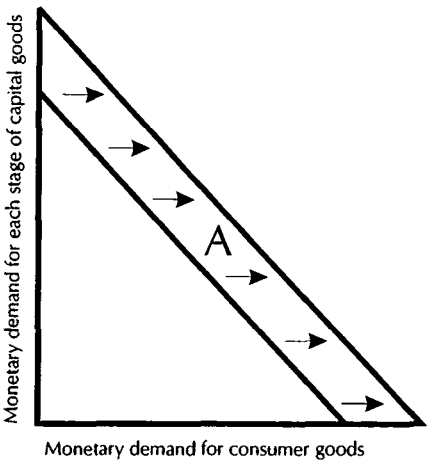

Figure 2

However, it should be remembered that the new volume of fiduciary media created by the banks is not delivered directly to its final users (the economic agents who increased their stock of bank money by the amount of A in Figure 1), but is, at first, granted as loans to the entrepreneurs who spend the whole of the volume represented by area A on investment goods, giving rise, at the beginning, to a productive structure like the one shown in Figure 3.

However, this more capital-intensive structure cannot be maintained in the long term since, once the newly-created fiduciary media reach their final users (who already have accumulated the new banking money they wanted from the beginning, shown in Figure 1), they spend them, under our hypothesis, on consumer and investment goods in a proportion identical to that shown in Figures 1 and 2. If we place Figure 3 on top of Figure 2 (the result is shown in Figure 4), it is easy to observe the distortion that takes place in the productive structure. The shaded area B represents the investment projects undertaken erroneously as a consequence of the fact that the whole new credit issue made by free banking in order to offset the previous increase in demand for fiduciary media is used for investment.[20] The shaded area C (with a surface equal to B) represents the part that the *final* holders of fiduciary media spend on the goods closest to consumption. This leaves the productive structure in the same proportions as in Figure 4, but only after the painful and inevitable readjustment indicated in the Austrian theory of economic cycles, which the fractional-reserve free-banking system has been unable to avoid, has taken place. We may conclude that, in this case, to the contrary of what Selgin and White suggest,[21] even though the increase in fiduciary media is exactly matched by a previous increase in the holdings of fiduciary media by the economic agents, it sets in motion the Austrian business cycle.

[20]Selgin and White (1996, p. 94) implicitly acknowledge this when they say that "Benefits accrue to bank borrowers who enjoy a more ample supply of intermediated credit, and to everyone who works with the economy's consequently larger stock of capital equipment."

[21]"We deny that an increase in fiduciary media *matched by an increased demand to hold fiduciary media* is disequilibrating or sets in motion the Austrian business cycle" (ibid., pp. 102-3).

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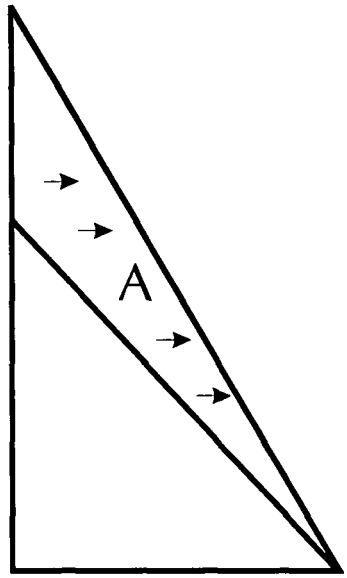

Figure 3

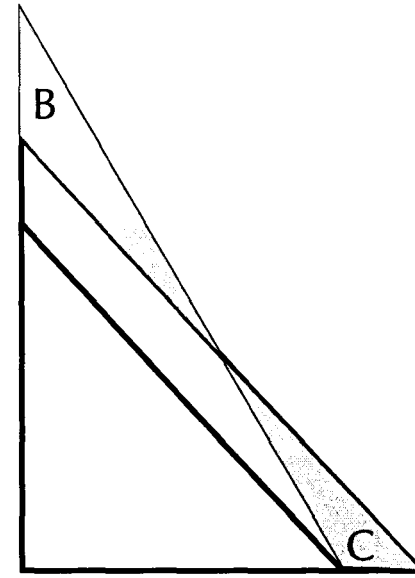

Figure 4

THE POSSIBLE CONFUSION BETWEEN THE CONCEPT OF SAVING AND THE CONCEPT OF DEMAND FOR MONEY

The attempt to recover at least the essence of the doctrine of the "needs of trade" and demonstrate that fractional-reserve free banking will not give rise to economic cycles has led Selgin to defend a somewhat similar thesis to that set forth by John Maynard Keynes when he discussed bank deposits. We should remember how, for Keynes, the man who holds the additional money corresponding to the new bank credit is said to be *saving:*

> Moreover, the savings which result from this decision are just as genuine as any other savings. No one can be compelled to own the additional money corresponding to the new bank-credit, unless he deliberately prefers to hold more money rather than some other form of wealth. (Keynes 1936, p. 83)

Selgin's position seems to be parallel to that of Keynes when he considers that the public demand to hold cash balances in the form of bank notes and deposit accounts simultaneously reflects the desire to offer short-term "loans" for an identical amount through the banking system. The only difference between the two authors on this matter is that Selgin (1994, p. 54) seems to limit his conclusion to "adjustments in the supply of loanable funds, meant to preserve monetary equilibrium." In fact, Selgin affirms that

> to hold inside money is to engage in voluntary saving. . . . Whenever a bank expands its liabilities in the process of making new loans and investments, it is the holders of the liabilities who are the ultimate lenders of credit, and what they lend are the real resources they could acquire if, instead of holding money, they spent it. When the expansion or contraction of bank liabilities proceeds in such a way as to be at all times in agreement with changing demands for inside money, the quantity of real capital funds supplied to

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> borrowers by the banks is equal to the quantity voluntarily offered to the banks by the public. Under these conditions, banks are simply intermediaries of loanable funds. (Selgin 1988, pp. 54–55)[22]

However, an increase in the balances of fiduciary media that the public wishes to hold is perfectly compatible with a simultaneous increase in the demand for consumer goods and services if the public decides to decrease its investment expenditure. The truth is that any economic agent may use his money balances in any of the following three ways: he may spend them on consumer goods and services; he may spend them on investments; or he may hold them in the form of cash balances or fiduciary media. There is no other alternative. The decision as to the proportion that will be spent on consumption or investment is different to and independent of the decision taken on the fiduciary media and cash balances one wishes to hold. Thus, it cannot be concluded that all money balances are equivalent to "savings" to which the corresponding bank credits and investment should correspond, as it is perfectly possible that, as we have seen before, part of the new fiduciary media created by the banks is not invested but consumed by the final holders.

To say that "every holder of demand liabilities issued by a free bank grants that bank a loan for the value of his holdings" (Selgin 1987, p. 440) is the same as saying that any creation of bank money in response to an increase in the demand for fiduciary media implies, ultimately, the *a posteriori* grant of a loan for the same amount to the bank. However, the bank generates credits from nowhere and offers purchasing power to the entrepreneurs, who receive it without taking any account at all of the real desires for consumption and investment of the economic agents who, in the final analysis, will become the ultimate holders of the fiduciary media it creates. And thus it is very possible that, as we have already seen, if social preferences on consumption and investment have not changed, at least part of the new fiduciary media created by the banks will ultimately be used to increase consumer goods expenditures, forcing the relative prices of this type of goods to rise.

Normally, the fractional-reserve free-banking theorist considers that all notes or deposits issued by a bank are *financial assets* which means a *loan*. Juridically, there are serious problems with this idea, which we will explain later. Economically, this implies that bank money is a *financial asset* that represents the voluntary saving of an economic agent who *lends* present goods (generally money) in exchange for future goods (generally also money).[23] However, *money is in itself a present good*

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[22]Selgin's thesis reminds us of the tautological identification of savings and investment which underlies Keynes's works and, according to Benjamin Anderson, is the equivalent of considering inflation identical to savings:

> One must here protest against the dangerous identification of bank expansion with savings, which is part of Keynesian doctrine. This doctrine is particularly dangerous today, when we find our vast increase in money and bank deposits growing out of war finance described as "savings," just because somebody happens to hold them at a given moment of time. From this doctrine, the greater the inflation, the greater the savings! (Anderson 1976, pp. 391–92)

Selgin (1988, p. 59) himself acknowledges that Keynesians "who do not regard the liquidity trap as an important factual possibility would probably accept it [Selgin's framework of monetary equilibrium] as entirely adequate."

[23]How can it be conceived that a bank note or bank deposit, which is money, constitutes a financial asset and, therefore, represents, in turn, for the holder, the delivery of present money to a third party in exchange for future money? The conception of bank money as a financial asset clearly

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that is perfectly liquid (O'Driscoll 1986) and holding fiduciary media balances gives no indication of the behavior of the economic agent who owns the money in relation to the proportion in which he wishes to consume or invest. For the overall banking system, the total stocks of fiduciary media are not *financial assets*, as *they are not normally withdrawn* from the system, but rather circulate indefinitely, passing from hand to hand, since they are money (or better, a perfect *money substitute*). On the contrary, a financial asset represents the delivery of present goods in exchange for future goods which must always be returned on a *certain future date* (even if it is after a short time period) and its creation results from a real and previous increase in saving by the economic agents. Furthermore, the financial asset is generally a certificate that represents that, today, present money has been renounced in exchange for obtaining a higher amount of money tomorrow. If the financial asset itself is considered, in turn, to be converted into money, an inflationary duplication of payment means would be created from nowhere without the need for any actual saving.

New savings always requires a decrease in the rate of real consumption that has existed (i.e., a sacrifice). It is not the difference between real consumption and the hypothetical "potential" consumption which could be enjoyed if all the fiduciary media balances were spent on consumer goods. Selgin appears to uphold the second idea when he proposes to change Machlup's definition of "created credit" because the latter considers, in our opinion correctly, that there is "created credit" whenever the expansionary granting of credits can provide a purchasing power that has not previously been sacrificed from consumption (i.e., saved) by anybody, even if, as we have shown, the creation of credit tends to compensate for a previous increase in the demand for fiduciary media. Credit should always come from *previous* saving if it is not to distort the productive structure. If this consumption sacrifice has not taken place, but rather the investment is financed by a newly-created credit, the structure of production can, as we know, become distorted.[24]

Some Comments on the Historical Illustrations of Fractional-Reserve Free-Banking Systems

Fractional-reserve free-banking theorists have been putting significant intellectual effort into illustrating the essential elements of their theory with real historical cases. So far, some 60 specific historical cases in which a fractional-reserve banking system was developed with a considerable amount of freedom have been identified and studied in a variable degree of depth (Dowd 1993b, pp. 39–46). The general conclusion (Schuler and White 1992, p. 198) usually drawn from these historical studies is that "bank failure rates were lower in systems free of restrictions on capital, branching and diversification (e.g., Scotland and Canada), than in systems restricted in

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shows that duplicate payment means are created from nowhere: the money which is lent to, enjoyed and held by a third party, and the financial asset that the loan represents and which, in turn, is *also* said to be money.

[24]See Selgin (1988, p. 184). In the example of our diagrams, for Selgin, the entire surface A of our triangle would be "transfer credit" because it is "credit granted by banks in recognition of people's desire to abstain from spending by holding balances of inside money" (ibid., p. 60), whereas, for me (and Machlup) at least surface B would represent "created credit" as the economic agents have not restrained their consumption by the volume represented by surface C.

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these respects (England and the United States)." In fact, even if it is accepted that a free-banking system may give rise, *in relative terms*, to fewer banking crises than those which have arisen in some central bank systems, for the purposes of the present article, this conclusion is practically irrelevant for the following reasons.

First, the historical studies made to date, instead of concentrating on an analysis of whether the free-banking system avoided unilateral credit expansions, artificial booms and economic recessions, have, in practice, been limited to studying whether bank panics were more or less frequent and serious than in a central bank system (which is, obviously, a very different matter). We explained above the theoretical reasons why we believe that a real fractional-reserve free-banking system may give rise to significant processes of unilateral expansion of fiduciary media and how the fact that the new creation of bank money is always injected into the market in the form of credits, regardless of the desires of the economic agents to consume and invest, distorts the productive structure and gives rise to cycles of boom and recession. Although there is still a long way to go in the field of historical research into the cyclical impact of fractional-reserve free banking, there are a number of studies that analyze real fractional-reserve free-banking systems with no (or very few) legal restrictions, central bank or institutional barriers. All of them seem to confirm the thesis that fractional-reserve free-banking systems can generate important credit expansions able to provoke economic recessions. Thus, Carlo M. Cipolla has made a study that interprets the economic crisis of the second half of sixteenth-century Italy, in which the expansion of bank money played a leading role (de Soto 1996, pp. 62–63; Cipolla 1990). And even the Scottish fractional-reserve free-banking system was subject to recurrent phases of credit expansion and contraction, which led to the corresponding economic cycles of boom and recession, at least over the years 1770, 1772, 1778, 1793, 1797, 1802–1803, 1809–1810, 1818–1819, 1825–1826, 1836–1837, 1839 and 1847 (Checkland 1973). Likewise, there are traces of similar phenomena in the remaining cases of fractional-reserve free-banking systems which have existed historically.[25]

Second, the fact that the historical studies seem to indicate that, in fractional-reserve free-banking systems, there were fewer bank panics than in the systems with a central bank does not mean that the former were totally free from bank crises. Selgin (1993, p. 27) himself gives at least three significant cases: those which took place in Scotland in 1797, in Canada in 1837, and in Australia in 1893. And although, as said above, the relevant issue for our purposes is the volume of credit expansion and the general cycles of boom and recession induced by the banks in the economic system, rather than bank crises and panics *per se*, there are a number of institutional reasons that, in addition to the "lower" expansionary

[25]Thus, for example, Selgin, discussing the period of fractional-reserve free banking in Chile from 1866 to 1874, states that it gave rise to an "era of remarkable growth and progress, free of monetary crisis." And he adds that, during this period, "Chile's railroad and telegraph systems were developed, the port of Valparaiso was enlarged and improved, and fiscal revenues increased by one-quarter." All these phenomena suggest, according to the Austrian theory of economic cycles, that, during these eight years, there was a period of acute credit expansion, as Rothbard (1989) points out. Selgin, however, considers that the subsequent serious bank crisis was not due to the fractional-reserve free-banking system but to the fact that the government maintained an artificial parity between gold and silver which, as gold was undervalued, meant a massive exit of the gold reserves from the country. See Selgin (1990, pp. 5–6, p. 7 n. 3).

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capacity of a free-banking system in comparison with a central bank system, may help to explain this result. Thus, Rothbard (1995a, p. 491) indicates how, in the case of Scotland, the banks had "promoted" the use of their notes in economic transactions to such an extent that almost nobody demanded they be paid in gold and anyone who occasionally requested cash at the cash desk of their bank received general disapproval and was subject to pressure from the bankers, who usually described this behavior as "disloyal" and threatened to make it more difficult for the customer to obtain credits in the future.[26]

In any case, I do not think that the elimination of bank crises is the definitive historical criterion for evaluating which banking system is the best. If this were the case, even the fractional-reserve free-banking theorists would have to admit that the ideal banking system is a 100-percent gold reserve free-banking system, since Selgin (1993, p. 2) himself recognizes that "a 100-percent reserve banking crisis is an impossibility."

Third, there is an unquestionable historical fact: *none* of the 60 cases of fractional-reserve free banking has survived. All of them have been replaced by central bank systems, most of them during the period (from the second half of the nineteenth century to the beginning of the twentieth century) in which the world lived in a situation of relative *laissez-faire* and had not yet inclined towards the high level of economic intervention characteristic of the present century. The fact is that knowledge of *human nature* allows us to explain, to a great extent, the reasons why fractional-reserve free banking has given rise to the central bank systems with heavy intervention that we know today. Once the 100-percent reserve free-banking principle was violated and abandoned, and given the systematic *temptations* to which the different economic, social, and political agents were submitted, the results were practically irresistible. Some of these economic agents, the bankers, succumbed by abusing their capacity to issue fiduciary media, even though this threatened their own solvency. The depositors then, enthusiastically made deposits, with interest, until their bank went bankrupt, when they make a tremendous fuss and demand the help and intervention of the government. Above all else, the government, always trying to obtain easy and painless funding, found the mythical "philosopher's stone" that they have so long looked for through controlling and manipulating fractional-reserve banking. And

[26]Rothbard also argued that the fact that, in relative terms, there were fewer bankruptcies of banks in the supposedly free Scottish fractional-reserve banking system than in the English system does not in any way mean that the Scottish system was *superior*. In fact, bankruptcies of banks have been almost completely eliminated under the present systems based on a central bank and this does not mean that they are superior to a free-banking system subject to the law, but rather the contrary. The existence of bank bankruptcies, far from indicating that the system works badly may be a sign of the healthy social process of economic reaction that takes place in the market against the aggression implied by the privileged practice of banking with a fractional reserve. Thus, where there is a fractional-reserve free-banking system and bank bankruptcies and suspensions of payments do not occur regularly, one inevitably suspects that there are institutional reasons which protect the banks from the normal consequences of practicing their activity with a fractional reserve and which are able to play a role similar to the one currently played by a modern central bank. In short, the alleged historical case is not be a truly free-banking system and, therefore, its supposed greater stability could not be considered as a historical illustration to support the conclusions of the theory of monetary equilibrium under free banking (Rothbard 1988). Rothbard's thesis appears to be confirmed by Raymond Bogaert (1968, p. 392 n. 513) when he points out how, of the 163 banks known to have emerged in Venice since the end of the Middle Ages, there is documentary proof that at least 93 of them went bankrupt.

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finally, businessmen, economic theorists, and general public, for centuries, have succumbed to the expansionary and inflationary ideology of fractional-reserve banking. In an interesting summary chart, Dowd (1993b, pp. 40–45, 46) describes the *dominant* reasons (bank crisis, theory-ideology, and seigniorage) that ended with each of the known fractional-reserve free-banking systems and concludes that "of course, free banking was not perfect; in a world populated by imperfect people, no institution can be."[27] I would say, rather, that, given the imperfection of human beings and their abandonment of the most elementary moral and legal principles which should guide their actions (among which I include the need to practice free banking with a 100-percent reserve ratio), the evolution of historical events to date in the banking field should not come as a surprise to anyone.

THE JURIDICAL ARGUMENTS

The analysis of banking issues must be essentially multidisciplinary because there is an intimate theoretical and practical connection between the juridical and economic aspects of all social processes in general and those related to banking in particular.[28] According to the juridical tradition of continental Europe which originated from Roman law, the task of the classical jurist is a true *art*, aimed at seeking and finding the essence *(das Wesen)* of the juridical institutions that emerge from the network of social interactions. In this task, jurists never entertain the intention of being "original," "imaginative," or having "bright ideas," but rather of "serving a certain number of *fundamental principles*, which is, as Savigny pointed out, the merit of their greatness" (Iglesias 1972). Their basic undertaking is to *discover* the universal legal principles which are inherent in the logic of human relations and immutable, although it is true that, as a consequence of social evolution itself, the need often arises to apply these intrinsically immutable principles to new situations and problems that social evolution creates. In this continual task of exegesis and refinement of general legal principles, the jurists not only apply the logic of their discipline to the different cases they analyze, but also often receive important aid from other disciplines that, like economic theory and history, can illustrate the fields of social interactions that are functioning with an imperfect or contradictory juridical foundation.

One of the most relevant cases which shows how a confused and contradictory juridical foundation can give rise to serious historical cases of discoordination and social damage is fractional-reserve banking. This originates and develops as a result of the wish to merge two contracts, the deposit contract and the loan contract, which, like water and oil, are essentially incompatible with each other.

[27]It must be acknowledged that, in most cases, all these causes have coincided. This was the case, for example, in Chile, where the *bad apples* or unscrupulous bankers went into alliance with the politicians, and the latter, in turn, exploited the system for fiscal purposes. See Selgin (1990, pp. 5–7).

[28]The multidisciplinary nature of the critical analysis of the fractional-reserve free-banking system and, therefore, the importance of the juridical considerations, together with the economic ones, has also been brought into relief by Block (1988, pp. 24–32). Block also points out that it is very curious to note that none of the theorists of the modern Free-Banking School have made any systematic critical analysis of the proposal to establish a banking system with a 100-percent reserve. In fact, apart from some isolated comments by Horwitz, the Fractional-Reserve Free-Banking School theorists still have not tried to show why a banking system with a 100-percent reserve would not guarantee "monetary equilibrium" free from economic cycles. See Horwitz (1989, pp. 431–32, n. 18). The possible criticisms of a 100-percent reserve free-banking system have been handled systematically and refuted by Hülsmann (1996, pp. 10–17).

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Table 1
Essential Differences between Two Radically Different Contracts

Demand Deposit of Money	Loan of Money
Economic Differences	
1. Present goods are not exchanged for future goods.	1. Present goods are exchanged for future goods.
2. There is complete and continuous availability in favor of the depositor.	2. Availability is fully transferred to the borrower and lost by the lender.
3. There is no interest, since present goods are not exchanged for future goods.	3. There is interest, since present goods are exchanged for future goods.
Legal Differences	
1. The essential element that prevails is the *custody* or holding of the *tantundem* (i.e., equivalent in quantity and quality) that constitutes the depositor's basic motivation.	1. The essential element is the transfer of the availability of the present goods in favor of the borrower.
2. There is no term for returning the deposit and the contract is, rather, "at demand."	2. The contract requires a *term* be fixed for return of the loan and calculation and payment of interest.
3. The depositary's obligation is to keep the *tantundem* available to the depositor at all times (100-percent reserve ratio).	3. The borrower's obligation is to return the *tantundem* when the term expires, also paying the agreed interest.

Whenever it is attempted to violate or force together general legal principles, which are incompatible, there arise many harmful consequences that were not initially foreseen, some of which have been discussed from the economic point of view in the preceding pages.[29] The essential differences between contracts (which differ radically) for the irregular deposit of money (as a fungible good) and the loan of money are summarized in Table 1, which helps us to understand the juridical issues and problems which may arise from the contracts on which fractional-reserve banking is based.[30]

Thus, in the first place, it should be noted that the practice of banking with fractional reserves involves a logical impossibility from the juridical point of view. In fact, whenever a bank grants loans against money which has been deposited with it *at demand*, an ownership of money that did not previously exist is created from nowhere for an amount identical to that which has been loaned by the bank. The depositor *holds* his money in the form of a deposit and it forms part of his money balances. Simultaneously, the person receiving the loan from the bank receives an amount of money which, in turn, becomes part of his cash balances. This result shows an extremely serious juridical irregularity as contracts, at most, can only be the materialization of a cross transfer of properties *(do ut des)* but cannot create property *ex nihilo*. In fact, a new amount of physical money (e.g.,

[29]Furthermore, that this whole controversy about fractional-reserve free banking is taking place is also an indication that something strange is happening to the juridical foundation of this institution.

[30]These problems have even been handled by European case law on several occasions during this century. See the rulings cited in de Soto (1995, pp. 29–32; 1998, pp. 16–17).

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gold) has not been created but both actors (the depositor and the borrower) think and act as if they owned the same physical gold. This result, at least in the initial stages of the formation of the modern banking system, arose as a consequence of the undue appropriation and fraud committed by many bankers who used money given to them as deposits for loans.[31]

Once the bankers obtained from the government the *privilege* of acting on the basis of fractional reserves, their criminal status disappeared, at least from the standpoint of positive law. But this privilege in no way endows the monetary bank deposit contract with an adequate juridical foundation. On the contrary, this contract appears, on most occasions, as a contract which is null and void, from the point of view of general legal principles, since the *predominant purpose* of one of the parties, the depositor, is to make a deposit, while the other party, the depository banker, receives it as a loan. And, according to most standard legal principles, when each of the participants in an exchange believes that he is making a different contract, that contract is null and void. If this juridical theory of the *predominant subjective purpose*[32] of the contract (main *causa* of the contract in Roman Law) is applied to the millions of bank contracts currently in force, it would be very easy to see how the immense majority of the depositors think that they have, in fact, made a contract in which the nature of a deposit predominates, in order for such a deposit to form part of their money balances which can be transformed into currency at any time. On the contrary, the bankers receive the money as a loan, as demonstrated by the fact that they, in turn, hand it over to their borrowers, who thus increase their money balances. I think that nobody can deny the serious juridical ambiguity of the bank demand-deposit contracts which have been made to date.[33] They are called "deposits" commercially and contractually and, in fact, this name corresponds to the real main purpose which the banks' clients intend to attain. However, the bankers receive the deposits and use them as if they were loans which, as we have seen in Table 1, are radically different contracts.[34] Furthermore, it is clear that, if the majority of depositors cheat themselves (or are cheated) with

[31]The legally-invalid (i.e., criminal) historical origin of fractional-reserve banking seems to me to be unquestionable. With regard to the dual economic availability of the same amount of money generated from nowhere by fractional-reserve free banking, see Hoppe (1994, p. 67).

[32]The subjectivist conception on which Austrian economic theory is based is completely parallel to the legal point of view set forth, which considers, above all, the different causes or purposes of the parties in order to make one kind of contract or the other. This subjectivist approach (typically Austrian) is neglected by Selgin when he criticizes Mises's distinction between time liabilities and demand deposits because, according to Selgin, "Mises confuses a difference of degree [the duration of 'call loans' is unspecified] with one of substance." However, Mises's distinction is entirely correct because from the *subjective* point of view of bank clients, there is an extremely important difference of *substance*: whereas demand deposits are considered as perfect money substitutes, time liabilities are true loans that imply the loss of money available to the clients during its maturation period. See Selgin (1988, p. 62).

[33]The great Spanish jurist Felipe Clemente de Diego (1936, pp. 370–71) described this type of contract as *monstrous* or a *juridical abortion*, since it includes causes or purposes of the parties which essentially contradict each other.

[34]As a general rule, the bankers, in the contracts, general conditions, and forms of the transactions they enter into, never explain the exact nature of the contract, the obligation of holding and custody that they acquire, or whether or not the depositor has authorized them to invest the funds deposited. Everything is usually expressed vaguely and confusedly and, therefore, it is no rash allegation to suggest that the real contractual consent of the depositors is lacking.

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regard to the true nature of the contract they make and, moreover, are tempted by the promise of interest[35] or the provision of free-banking services, it cannot be accepted that the fact that this type of transaction is carried out massively is a *prima facie* demonstration that shows or reveals the public's real preference for this type of contract, or much less that it is socially necessary.

Third, even if the two parties, the depositors and the bankers, coincided exactly in the belief that the predominant purpose of the transaction was a loan (which is not certain to have been the case for the majority of people), the juridical nature of the monetary bank-deposit contract would not be resolved. This is the case because, from a juridical point of view, it is impossible that the banks can comply with the obligation to return the deposits they have received for an amount in excess of the reserves they hold. This impossibility is, furthermore, aggravated to the extent that the practice of fractional-reserve banking can generate banking crises and economic recessions which endanger the public's confidence in the banks. And contracts which are *impossible* to put into practice under certain circumstances are also null, according to general legal principles. Only by maintaining a 100-percent reserve which guaranteed that the supposed "loans" granted (by the depositors) may be repurchased (by the banks) at any moment, or through the existence and support of a central bank which provided all the liquidity necessary in moments of difficulty, could these hypothetical "loan" contracts with a covenant for the repayment of their *nominal* value at any moment be made *possible* and, therefore, valid.

Fourth, even if it is argued that the impossibility of compliance with bank-deposit contracts of money only occurs every certain number of years for some specific banks, their legal nature would still not be solved, because the practice of fractional-reserve banking is a *breach of public order* and is damaging to third parties.[36] In fact, fractional-reserve banking, as it generates expansionary credits without the support of real savings, distorts the structure of production and leads the entrepreneurs who receive the loans, deceived by the greater ease of the credit conditions, to undertake investments which, in the final analysis, will not be profitable. When the inevitable economic recession arrives, their investment projects will have to be interrupted and liquidated, with a high cost from the economic, social, and personal points of view, not only for the entrepreneurs and investors themselves, but also for the rest of the economic agents involved in the market process (workers, suppliers, consumers, depositors, bankers, etc.). We cannot, therefore, accept the argument that, in a free society, the banks and their clients should be free to establish the contractual covenants they consider most

[35]The fact that the depositors sometimes receive interest does not in any way change the essential purpose of the deposit (holding or custody of the money). "Nobody says no to a bit of luck" and, therefore, the *ingenuous* depositor to whom interest is offered will accept it immediately if his trust in the banker is maintained. The receipt of interest *contra naturam* (i.e., against the essential nature of the deposit contract) does not detract from the basic cause of the contract (continuous availability of the cash balance) or convert it into a loan. It merely shows that the banker is making undue use of the money deposited with him. The interest on deposit contracts is an advantage *contra naturam* which greatly reminds us of the advantages which confidence tricksters use to tempt the victims of their confidence tricks, who always fall into the trap as a result of their illegitimate desire to obtain something that is not appropriately theirs.

[36]Few criminal acts of negligent driving cause accidents or damages to third parties but, all of them are offenses since they imply a breach of public order.

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fitting.[37] Actually, when mutually satisfactory agreements between two parties are made with damages to third parties and therefore, constitute a breach of public order, the corresponding "contracts" are entirely null and void.

Hoppe (1994, pp. 70–71) explains that this type of contract damages third parties in three different ways: first, to the extent that the credit expansion increases the monetary supply and decreases the purchasing power of the monetary units of the other holders of money balances, part of the value their monetary units would have if the credit expansion had not occurred, is expropriated; second, the depositors in general are damaged because, as a consequence of the credit expansion process, the probability that, in the absence of a central bank, they will be able to recover their monetary units intact decreases; and, if a central bank exists, to the extent that, although the return of their nominal deposits might be guaranteed, the purchasing power of their monetary units will be significantly reduced; and, third, the greatest damage produced is to the rest of the borrowers and economic agents in the form of generalized malinvestment, financial crisis, unemployment, and significant unrest, stress, and human suffering.

Any manipulation of money, which is the *generalized* means of exchange accepted in society, always implies, in accordance with the very definition of the concept of money, that unidentified third-party participants are affected. We are, of course, not talking about the so-called pecuniary externalities which are transferred in the market through the price system as a result of changes in subjective valuations and in human actions subject to general legal principles. On the contrary, we refer to serious social interferences which originate from the irregular juridical foundation of bank demand-deposit contracts which make possible the anomaly of multiplying the amount of money, regardless of the wishes of the parties, without any saving taking place or anything new having occurred.[38] In fact, economically speaking, the effects of the credit expansion are, from a *qualitative* point of view, identical to those of the criminal forgery of coins and bank notes which are dealt with, for example, in articles 283–90 of the Spanish Criminal Code.[39] Both of them imply the creation of money, the redistribution of income in favor of a few people to the detriment of the other citizens, and the overall distortion of the productive system. However, from a *quantitative* point of view, only a credit expansion is able to expand the monetary supply by a sufficient volume and at a rate capable of feeding an artificial boom and causing a recession. In comparison with the credit expansion of fractional-reserve free banking and the

[37]Thus, similarly, a contract between a member of the Mafia and a professional killer can be: (a) completely voluntary, and (b) based on a perfect agreement in relation to the legal nature of the covenant. However, even in an entirely free libertarian society, it is a contract totally null and void because it is damaging to a third party (the potential victim).

[38]We do not agree with Selgin and White's (1996, pp. 92–93) comments.

[39]"The following will be sentenced to imprisonment for a period between twelve years and a day and twenty years, with loss of civil rights for the duration of the sentence: (1) Those who manufacture false money," art. 283 of the Spanish Criminal Code. It should be noted that, in a credit expansion, as in the case of the forgery of money, the social damage is very much diluted and, therefore, it will be very difficult for this offence to be prosecuted as a result of evidence brought at the request of the damaged party. For this reason, the offence is described in terms of the conduct (forgery of bank notes) and not in terms of the identification of the specific personal damages to which it leads. The same procedure will have to be followed if, at any time, it is decided to apply the same treatment as a criminal offense to the creation of money by the banks.

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monetary manipulation of governments and central banks, the criminal forgery of money is child's play and almost imperceptible.

The above considerations have had their influence on some modern fractional-reserve free-banking theorists, who have proposed, in order to guarantee the stability of the system, that the banks should establish a *safeguard* clause on their notes and deposits, informing their clients that the bank may decide, at any time, to suspend or defer the return of the deposits or the payment of the corresponding notes in cash.[40] It is clear that the introduction of this option clause goes against the nature of the concept of money, the essence of which is precisely the availability of perfect, i.e., immediate, complete and totally unconditional, liquidity at any moment. The option clause means that the depositors and noteholders, in crisis conditions, can be converted into compulsory lenders, rather than continuing as depositors holding perfectly liquid monetary units or perfect money substitutes. Thus, the traditional deposit contract would be converted into a peculiar form of random contract or lottery, in which recovery of the corresponding deposits would depend on the luck, influence, and other specific circumstances of each moment. No objection can be raised to the fact that certain parties decide to make such an irregular random contract. But, to the extent that in spite of the existence of this clause and the *perfect* knowledge of its implications by all the participants (bankers and their clients), they and the rest of the economic agents would behave as if they considered, from the subjective point of view, that for practical purposes their demand deposits are perfectly liquid, then the banking system could identically create credit expansions. The option clauses, therefore, would not avoid the reproduction of the processes of expansion, crisis, and economic recession which the practice of fractional-reserve free banking can create. The option clauses at most can protect the banks, but not society or the economic system, from the damages produced by the successive phases of credit expansion, boom, and recession. Thus, the option clauses argument is only a *last line of defense* that in no way solves the problem that fractional-reserve free banking can produce very serious systematic damages to third parties which constitute a breach of public order.

It is surprising that, in spite of all the foregoing arguments, most of the Fractional-Reserve Free-Banking School theorists, instead of proposing the abolition of fractional-reserve banking, only propose the elimination of central banks and the complete privatization of the banking system, without making any reference to what would be the best solution to all the economic and juridical problems discussed in this article: a free-banking system with a 100-percent reserve requirement. It is true that this privatization would tend to put an earlier stop to the almost unlimited abuses that the monetary authorities commit today in the financial field, but it does not prevent the possibility that abuses could also be committed (on a smaller scale) in the private field. This is similar to the situation that would arise if governments were allowed to systematically kill, steal, or commit any other crime. The social damage that this would generate would be tremendous, in view of the

[40]These "option clauses" were already in force in the Scottish banks from 1730 to 1765 and reserved the right to temporarily suspend cash payment of the notes they had issued. Thus, referring to bank panics, Selgin (1994, p. 1455) says that "Banks in a free-banking system might however avoid such a fate by issuing liabilities contractually subject to a 'restriction' of base money payments. By restricting payments banks can insulate the money stock and other nominal magnitudes from panic-related effects."

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enormous power and monopolistic nature of the State. And without any doubt, the privatization of these criminal activities (eliminating the systematic practice of them by the government) would tend to "improve" the situation appreciably: at least the great criminal power of the State would disappear and private economic agents would be allowed to develop prevention and defense procedures against these crimes. However, the privatization of criminal activities is not the final solution to the problem they pose and they would only be completely eliminated if they were put down by all possible legal means, even if they were committed by private agents in an entirely private environment. In fact, all central banks, all the present tangle of banking legislation, and all the economic problems which may be generated by fractional-reserve free banking could be solved through a simple article in the Criminal Code of the future Libertarian Society which would say the following: "Any banker who appropriates the money deposited with him at demand for his own benefit and does not maintain a 100-percent reserve in relation thereto at all times shall be punished by imprisonment and obliged to indemnify the victims."[41]

The traditional form in which the controversy between the supporters of central banks and those of fractional-reserve free banking is posed is essentially erroneous. In fact, the advocates of fractional-reserve free banking do not realize that their proposal unleashes an almost unavoidable trend towards the emergence, development, and consolidation of a central bank. The credit expansion that can be generated by any fractional-reserve banking system gives rise to reversion processes, in the form of possible banking crises and economic recessions, which almost inevitably cause the affected citizens and bankers to demand the intervention of the government, as well as the state regulation of the activity. Furthermore, the bankers themselves soon discover that they reduce the risk of insolvency if they reach agreements among themselves, merge, and even demand the creation of a lender of last resort (central bank), which provides them with the necessary liquidity at times of adversity and institutionalizes and officially orchestrates and coordinates the growth of the credit expansion. Finally, governments cannot avoid the temptation to use this enormous power to create money permitted by fractional-reserve banking for their own benefit.

We can, therefore, conclude that the practice of fractional-reserve banking is the main factor responsible for the emergence and development of the central bank. For this reason, the theoretical and practical discussion should be raised, not in traditional terms, but between the only two feasible alternatives, radically opposed to each other, which are: either a free-banking system subject to traditional legal principles (i.e., with a 100-percent reserve ratio), in which all transactions in which a fractional reserve is established, be they "voluntary" or otherwise, are considered illegal and a breach of public order; or a system which allows the practice of fractional-reserve banking, from which a central bank will inevitably emerge as a lender of last resort and controller of the whole financial system. These are the only two theoretically and practically viable alternatives.

[41] A similar conclusion is reached by Rothbard (1995e, pp. 80–81).

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REFERENCES

Anderson, Benjamin M. [1949] 1979. *Economics and the Public Welfare: A Financial and Economic History of the United States, 1914–1946*. Indianapolis, Ind.: Liberty Press.

Block, Walter. 1988. "Fractional Reserve Banking: An Interdisciplinary Perspective." In *Man, Economy, and Liberty: Essays in Honor of Murray N. Rothbard*. Walter Block and Llewellyn H. Rockwell, Jr., eds. Auburn, Ala.: Ludwig von Mises Institute.

Boettke, Peter J., and David L. Prychitko, eds. 1994. *The Market Process: Essays in Contemporary Austrian Economics*. Cheltenham, U.K.: Edward Elgar. Pp. 166–76.

Bogaert, Raymond. 1968. *Banques et Banquiers dans les Cités Grecques*. Leyden, Holland: A.W. Sijthoff.

Checkland, Sidney J. 1973. *Scottish Banking: A History, 1695–1973*. Glasgow: Collins.

Cipolla, Carlo M. 1990. *Il Governo de la Moneta: La Moneta a Firenze nel Cinquecento*. Bologna: Societá editrice Il Mulino.

de Diego, Felipe Clemente. 1936. *La cuenta corriente de efectos de un sector de la banca catalana*. Madrid.

Dowd, Kevin. 1989. *The State and the Monetary System*. New York: St. Martin's Press.

———. 1993a. *Laissez-Faire Banking*. London: Routledge.

———, ed. 1993b. *The Experience of Free Banking*. London: Routledge.

Eatwell, James, Murray Milgate, and Peter Newman, eds. 1992. *The New Palgrave: A Dictionary of Money and Finance*. 4 Vols. New York: Macmillan.

Friedman, Milton, and Anna J. Schwartz. 1986. "Has Government Any Role in Money?" *Journal of Monetary Economics* 17:37–72. Reprinted in Leube, ed. 1986. Pp. 499–525.

Glasner, David. 1989. *Free Banking and Monetary Reform*. Cambridge, U.K.: Cambridge University Press.

———. 1992. "The Real-Bills Doctrine in the Light of the Law of Reflux." *History of Political Economy* 24, no. 4 (Winter): 867–94.

Haberler, Gottfried. 1931. "The Different Meanings Attached to the Term 'Fluctuations in the Purchasing Power of Gold' and the Best Instrument or Instruments for Measuring such Fluctuations." Geneva: League of Nations.

Hayek, Friedrich A. 1931. "Preface." *Prices and Production*. 1st ed. London: Routledge.

———. [1935] 1967. *Prices and Production*. New York: Augustus M. Kelley.

———. [1941] 1976. *The Pure Theory of Capital*. London: Routledge and Kegan Paul.

———. 1978. *Denationalization of Money: The Argument Refined, An Analysis of the Theory and Practice of Concurrent Currencies*. London: Institute of Economic Affairs.

———. 1991. "English Monetary Policy and the Bullion Debate." Pt. 3. *The Trend of Economic Thinking: Essays on Political Economists and Economic History*. W.W. Bartley III, and Stephen Kresge, eds. *The Collected Works of F.A. Hayek*. Vol. 3. London: Routledge.

Hoppe, Hans-Hermann. 1994. "How is Fiat Money Possible?—or, The Devolution of Money and Credit." *Review of Austrian Economics* 7, no. 2:49–74.

Horwitz, Steven. 1989. "Keynes's Special Theory." *Critical Review: A Journal of Books and Ideas* 3, nos. 3–4 (Summer/Autumn): 411–34.

———. 1992. *Monetary Evolution, Free Banking, and Economic Order*. Oxford, U.K.: Westview Press.

———. 1994. "Misreading the Myth: Rothbard on the Theory and History of Free Banking." In Boettke and Prychitko, eds. 1994.

Hülsmann, Jörg Guido. 1996. "Free Banking and Free Bankers." *Review of Austrian Economics* 9, no. 1:3–53.

Iglesias, Juan. 1972. *Derecho Romano: Instituciones de Derecho Privado*. Barcelona: Ediciones Ariel.

Keynes, John Maynard. 1936. *The General Theory of Employment, Interest, and Money*. London: Macmillan.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Klein, Benjamin. 1974. "The Competitive Supply of Money." *Journal of Money, Credit, and Banking* 6:423–53.

Laidler, David. 1992. "Free Banking Theory." In Eatwell et al. 1992. Vol. 2.

Leube, Kurt, ed. 1986. *The Essence of Hayek*. Palo Alto, Calif.: Hoover Institution Press.

Machlup, Fritz. 1940. *The Stock Market, Credit, and Capital Formation*. New York: Macmillan.

Mises, Ludwig von. [1924] 1981. *Theory of Money and Credit*. Indianapolis, Ind.: Liberty Fund. 2nd German edition. *Theorie des Geldes und der Umlaufsmittel*. Munich: Duncker and Humblot.

———. 1978. *On the Manipulation of Money and Credit*. Percy L. Greaves, Jr. ed. Dobbs Ferry, N.Y.: Free Market Books.

———. [1949] 1998. *Human Action: A Treatise on Economics*. Auburn, Ala.: Ludwig von Mises Institute.

O'Driscoll, Gerald P. 1986. "Money: Menger's Evolutionary Theory." *History of Political Economy* 18, no. 4:601–16.

Parnell, Henry. 1827. *Observations on Paper Money, Banking, and Overtrading: Including Those Parts of the Evidence Taken Before the Committee of the House of Commons which Explained the Scotch System of Banking*. London: James Ridgeway.

Rothbard, Murray N. 1988. "The Myth of Free Banking in Scotland." *Review of Austrian Economics* 2:229–45.

———. 1989. "The Other Side of the Coin: Free Banking in Chile." *Austrian Economics Newsletter* (Winter): 1–4.

———. 1995a. *Classical Economics: An Austrian Perspective on the History of Economic Thought*. Vol. 2. Cheltenham, U.K.: Edward Elgar.

———. 1995b. "Monetary and Banking Thought 1: The Early Bullionist Controversy." Chap. 5. In Rothbard 1995.

———. 1995c. "Monetary and Banking Thought 2: The Bullion Report and the Return to Gold." Chap. 6. In Rothbard 1995.

———. 1995d. "Monetary and Banking Thought 3: The Struggle over the Currency School." Chap. 7. In Rothbard 1995.

———. 1995e. "The Present State of Austrian Economics." *Journal des Économistes et des Études Humaines* 6, no. 1. Reprinted in Rothbard 1997.

———. 1997. *The Logic of Action One: Method, Money, and the Austrian School*. Chap. 7. Cheltenham, U.K.: Edward Elgar.

Salerno, Joseph T. 1993. "Mises and Hayek De-Homogenized." *Review of Austrian Economics* 7, no. 2:144ff.

Schuler, Kurt, and Lawrence H. White. 1992. "Free Banking History." In Eatwell et al. 1992. Vol. 2.

Schwartz, Anna J. 1992. "Banking School, Currency School, Free Banking School." In Eatwell et al. 1992. Vol. 1.

———. 1993. "The Theory of Free Banking." Manuscript presented at Mont-Pèlerin Society Regional Meeting.

Selgin, George A. 1987. "The Stability and Efficiency of Money Supply under Free Banking." *Journal of Institutional and Theoretical Economics* 143:435–56. Reprinted in White, ed. 1993. Vol. 3. Pp. 45–66.

———. 1988. *The Theory of Free Banking: Money Supply under Competitive Note Issue*. Totowa, N.J.: Rowman and Littlefield.

———. 1990. "Short-Changed in Chile: The Truth about the Free Banking Episode." *Austrian Economics Newsletter* (Spring/Summer): 5–6, 7 n. 3.

———. 1993. "Are Banking Crises a Free-Market Phenomenon?" Paper presented at Mont-Pèlerin Society Regional Meeting.

———. 1994. "Free Banking and Monetary Control." *The Economic Journal* 104, no. 427 (November): 1449–59.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Selgin, George A., and Lawrence H. White. 1994. "How Would the Invisible Hand Handle Money?" *Journal of Economic Literature* 32, no. 4:1718–49.

———. 1996. "In Defense of Fiduciary Media—or, We are *Not* Devo(lutionists), We are Misesians!" *Review of Austrian Economics* 9, no. 2:83–107.

Skousen, Mark. 1990. *The Structure of Production*. New York: New York University Press.

Smith, Vera C. [1936] 1990. *The Rationale of Central Banking and the Free Banking Alternative*. Indianapolis, Ind.: Liberty Press.

de Soto, Jesús Huerta. 1995. "A Critical Analysis of Central Banks and Fractional-Reserve Free Banking from the Austrian Perspective." *Review of Austrian Economics* 8, no. 2:25–38.

———. 1996. "New Light on the Prehistory of the Theory of Banking and the School of Salamanca." *Review of Austrian Economics* 9, no. 2:59–81.

———. 1998. *Dinero, Crédito Bancario y Ciclos Económicos*. Madrid: Unión Editorial.

Timberlake, Richard. 1984. "The Central Banking Role of Clearinghouse Associations." *Journal of Money, Credit, and Banking* 16, no. 2:1–15.

———. 1987. "Private Production of Scrip-Money in the Isolated Community." *Journal of Money, Credit, and Banking* 19, no. 4:437–47.

———. 1989. "The Government's License to Create Money." *Cato Journal* 9, no. 2 (Autumn): 302–21.

White, Lawrence H. 1984. *Free Banking in Britain: Theory, Experience and Debate, 1800–1845*. 2nd ed. New York: Cambridge University Press.

———. 1989. *Competition and Currency: Essays on Free Banking and Money*. New York: New York University Press.

———. 1992. "Mises on Free Banking and Fractional Reserves." *A Man of Principle: Essays in Honor of Hans F. Sennholz*. John W. Robbins and Mark Spangler, eds. Grove City, Penn.: Grove City College Press.

———, ed. 1993. *Free Banking*. 3 Vols. Cheltenham, U.K.: Edward Elgar.

Yeager, Leland B., and Robert Greenfield. 1983. "A Laissez-Faire Approach to Monetary Stability." *Journal of Money, Credit, and Banking* 15, no. 3:302–15. Reprinted in White, ed. 1993. Pp. 180–95.

———. 1986. "Competitive Payment Systems: Comment." *American Economic Review* 76, no. 4:848–49.

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On the Abuse of Patents as Economic Indicators

Pierre Desrochers

Patents have a long history as a proxy for inventive activity. Although these data lost ground in the early 1960s to other measures of technical innovation, they have once again become fashionable in the last decade. There are many reasons to justify their use, ranging from their availability to the fact that they are by definition related to inventiveness and that they appear to be based on an objective and only slowly changing standard. There are, however, many empirical issues and problems in drawing inferences from these data, some well-known, others rarely mentioned. It is the purpose of this article to demonstrate that these drawbacks are major and that consequently patent data give, at best, a very partial and misleading picture of innovation and technical change.

The use of patent data as a proxy for economic and inventive activity is not new. Such data have been used in numerous studies of the relationship between firm size on the one hand and the volume of investment or the rate and direction of innovative activities on the other. They have also been used as indicators in studies on a wide range of topics, e.g., long-run development, long wave theories, and the relationship between economic and technological change have been studied in this way. Comparative studies of industries and countries have also been undertaken using patent data as indicators (Basberg 1987; Cooper 1991b).

Although they lost ground in the early 1960s to other measures of technical innovation such as product count, research and development (R&D) spending, number of skilled personnel and Standard Industrial Classification (SIC) information, patents have once again become fashionable among scientometrists (Callon et al. 1992), economic historians (MacLeod 1988; Sokoloff 1988), economists (Jaffe et al. 1992; Jaffe and Palmer 1996; Lanjouw et al. 1996; OCDE 1996) and economic geographers (Ceh 1997) in the last two decades. It is no wonder that the idea that something interesting might be learned from patent data tends to be rediscovered in each generation, for in the desert of good measures of technical progress, as one economist puts it, "patent statistics loom up as a mirage of wonderful plentitude and objectivity . . . [they] are available; they are by definition related to inventiveness, and they are based on what appears to be an objective and only slowly changing standard" (Griliches 1990, p. 1661).

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The use of patent statistics rests, of course, on the assumption that they reflect inventive activity and innovation.

> After all, a patent does represent a minimal quantum of invention that has passed both the scrutiny of the patent office as to its novelty and the test of the investment of effort and resources by the inventor and his organization into the development of this product or idea, indicating thereby the presence of a non-negligible expectation as to its ultimate utility and marketability. (Griliches 1990, p. 1669)

Other economists have added:

> Among measures of the extent of innovation patents are unique in both the richness of the information they contain and in the breadth of their coverage. Patent documents contain detail on the characteristics of individual innovations (e.g., its technological area, or its citation to related innovations) and their inventors (both the inventor *per se* and the owner or the assignee of the patent) not available elsewhere. Moreover, unlike R&D expenditure data, which is at best available for a subset of larger firms, patent data is available for all firms and individuals over a very long time period. . . . These features of patent data make it possible to use them to study the efficacy of policies tailored to particular technological areas or specific types of firms, the cross country flows of benefits from the patent system, externalities in the knowledge generation process, and many related phenomena. (Lanjouw et al. 1996, pp. 1–2)

There are, however, many problems, most of them well-known, in using these sorts of data, although they are rarely dealt with in a serious manner by those using them. For example, there are a number of methodological problems in the collection of patent statistics. Some people will claim patents for a variety of reasons that are not related to the practical use of a given innovation. Another major problem is that there are most certainly many more people who have not gone through the trouble of seeking patents for their innovations than there are recognized patent holders. All in all, it can probably be said that, taken as a whole, what comes out of a patent office is at best representative of the technological potential of a given number of innovations, but certainly not of their technological actuality.

Although most researchers using patents—or for that matter most indicators of technological change—are quick to point out that these data are only indirect measures, "the data are used as if real reservations had not been made" (Basberg 1987, p. 138). In doing so, most researchers follow Schmookler's famous dictum (1966, p. 56): "We have a choice of using patent data cautiously and learning what we can from them, or not using them and learning nothing about what they alone can teach us."

Austrian economists, on the other hand, have long been hostile to the use of economic statistics and to the patent system (Oakman 1986; Rothbard 1993). There is no need, however, to invoke Austrian theory to oppose the use of dubious economic indicators such as patent data because, even on strictly empirical grounds, the case against these statistics is nothing short of overwhelming. It will therefore be argued that, no matter what the corrective strategies adopted by the researcher, patent data do not provide a reliable measurement of economic and inventive activity and have nothing in particular to teach us.

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This article will first deal with the traditional rationales for and against the patent system, so as to put the data in perspective. It will then cover the main problems associated with patent data as a proxy for inventive activity by looking at a number of findings from older studies dealing directly or indirectly with the patent system. Even though the purpose of this article is not to deal with the functioning of the patent system or with its rationale, overlaps with these topics cannot be avoided.

THE PATENT SYSTEM IN THEORY AND PRACTICE

The Theoretical Nature of Patents

In theory, a patent is an official document that confers proprietorship (i.e., the exclusive right to make, use, or sell) of an invention on the recipient. It is granted by an official of the State in accordance with patent law and is enforceable in the courts. Grant of a patent is preceded by examination of applications by the patenting authority, but the final responsibility for validating or invalidating a patent lies with the courts. If a patent is granted, a public document is created containing information about the inventor, his employer, and the technological antecedents of the invention. Among this information are claims that serve, along with "references" and "citations," the legal function of delimiting the scope of the property right that the patent constitutes. The right embedded in the patent can be assigned by the inventor to somebody else, usually his employer, or it can also be sold to or licensed for use by somebody else. In order to be eligible for patent protection in America, an invention must be: (1) new and not obvious; (2) not previously achieved by someone else; (3) useful and important; and (4) not injurious to public morals and health. Patents may be obtained on machines, manufactures, compositions of matter and processes, as well as on combinations of these. In addition, patents can also be obtained on certain designs and on genetically engineered organisms.

A patent grants its owner the right to exclude others from making, using, and selling the invention for a period of 20 years from the filing date. There are special circumstances where a patent owner cannot use his own invention because it would infringe on the patent rights of others.[1] In return for the right to exclude those who copy the invention and those who independently discover the same thing, the inventor must disclose the invention to the public at the time of the patent's issue. This disclosure, contained in the patent itself, must be sufficiently detailed so that those "ordinarily skilled in the art" may copy and utilize the invention after the patent's expiration or without undue experimentation (this is known as "enablement"). While the patent is in force, however, the inventor is given the right to control the use of his knowledge. It should be noted here that some American states allow a person who invented something patented independently and before the patentee, to continue applying the invention for which the patent was issued (this practice is usually known as "prior user right").

[1]For example, inventor Jones patents a device comprised of components A, B, and C. Inventor Smith improves on Jones's invention by adding D. Smith *can then get a patent* on the new device with components A, B, C, and D. Inventor Smith can prevent everyone from using the device with components A, B, C, and D, however, Smith cannot use it either because it infringes on Inventor Jones's patent. On the other hand, Jones cannot add component D to his patented device because that would infringe on Smith's patent. What results then is a cross-license between the original and improvement patent owners.

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The Case for the Patent System

The rationale for the patent system is completely utilitarian. Intellectual property is said to be property no less than a house or a car and, as most will acknowledge, property rights are a critical prerequisite for economic growth. Supporters of the patent system usually argue that it is an important incentive to entice the inventor to put in the work required to produce an invention. Without it, it is said, there would be no suitable way for the innovator to appropriate a decent part of the social benefits of his invention.

To put it briefly, the social returns from innovative activities are held to be very high, but it does not necessarily follow from this that the private returns (i.e., the returns to the innovating firm or individual) are also high. Once new information is produced, it is deemed to have become what most economists call a free or a public good (i.e., its use does not diminish its stock and it cannot be appropriated by individuals). If information about inventions is made available as soon as it is discovered, there might then be no incentive for anyone to take the risks involved in spending money on necessary research and development. Inventors can not therefore reap the benefits of their work without special safeguards, because once their inventions have been implemented or otherwise disclosed, they can be freely copied by others in the absence of protection. Why then should an inventor devote time or money on developing a better mousetrap if a competitor who does not need to recoup the R&D costs can undercut him? The absence of a patent system, it is therefore argued, adversely affects the development of inventions.

The stated purpose of patents is thus to encourage innovation and technical progress by providing a temporary monopoly for the inventor and by forcing the early disclosure of the information necessary for the production of an item or the operation of a new process. It is argued that any welfare losses due to the restrictions in disseminating an invention are outweighed by the incentive to invention they provide. It is therefore commonly said that patents promote technological ingenuity, enrich nation's economies, offer a proper measure of the technological and economic state of a society, and compensate deserving individuals for their hard work (Silberston 1967; Taylor and Silberston 1973; Walker and Bloomfield 1988).

Rosegger (1986, pp. 146–47) has summed up the main economic arguments usually put forward by proponents of the patent system: (1) well-defined and protected property rights are essential to a market economy in which rational self-interest guides the behavior of individuals; (2) although patents confer monopoly rights, the fact that the technological bases for these rights are made public contributes to the body of generally accessible information; (3) the patent system provides the necessary incentives for further investment in technological advancement; (4) even in the age of large-scale corporate inventing, patent protection is essential, because many modern technologies require large investments and long time periods for the development and commercialization of new ideas; (5) to the extent that patents cover successful process innovations, lower costs of production and lower market prices will result even if the patentee behaves like a rational monopolist (i.e., short-run profit is maximized); and (6) the patent laws encourage the development of improved products, because they allow firms to extend their monopoly positions through improvement patents.

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The Case Against the Patent System

There has always been a set of thorny questions about the patent system. Historian of technology George Basalla (1990, p. 120) has stressed the most frequent ones: (1) Who is to judge if an invention is truly novel, useful, or important?; (2) On what grounds should these judgments be made?; (3) Should we accept the inventor's word about originality in evaluating an invention?; (4) Are patents inherently elitist, monopolistic, and therefore antidemocratic?; and (5) Are some discoveries—scientific laws, mathematical theorems—truly unpatentable?

Rosegger (1986, pp. 147–48) has also summed up the traditional economic arguments against the patent system: (1) patents create monopolies, and all monopolies involve a misallocation of society's resources; (2) in a socially optimal system of knowledge production must reflect the fact that the marginal cost of using existing information is zero and therefore the creation of "artificial" property rights is wasteful; (3) patent holders may capitalize on inventions by suppressing their development, even though these inventions would benefit the public; (4) patents lead to waste by inducing others to invent around or "patent around"[2] protected monopoly positions; (5) because there is no legal presumption of the validity of a patent, the equal burden of proof falling upon patentee and alleged infringer is anything but equal in economic terms. It must be pointed out that there is in fact a legal presumption of validity of patents; and (6) patent protection is unnecessary as an incentive for technological effort, because inventors can rely on other technical and institutional factors to achieve quasi-rents.

Analytical and historical examinations of patents and their meaning for technology and economic growth are generally deemed inconclusive. The general conclusion is that we must be cautious about accepting at face value the many flattering assessments of the modern patent system, because patents do not play anything like a dominant role among the various mechanisms by which returns from innovation are captured. A number of studies conducted by several authors over a span of more than 40 years (1957 to the present) have asked whether inventors find patents useful for excluding imitators and/or capturing royalty income. The answer uniformly found was that patent grants are not useful for either purpose in most industries (Svetos 1996; Hippel 1988).

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[2]Winter (1989, pp. 48–49) has defined *patenting around* in the following way:

> At the benign extreme, this term may simply mean providing through independent inventive activity an effective functional substitute for the patented process or product, so that the patent does not block the achievement of some larger innovative goal. The knowledge borrowed from the prior inventor's contribution could be limited to, at most, the insight that the function in question is a useful one to perform. Nothing remotely approaching patent infringement may be involved. At the other extreme, however, the new solution skirts the edges of the existing patent's scope with just enough room to spare to make a successful infringement action unlikely—and the judgment about what is enough room may invoke assessment not only of the legal scope of the existing patent, but also of the strategic stakes, resources, alertness, and litigation-proneness of the patent holder. In between these extremes there lies a broad interval where the borrowing from the prior inventor is very real but probably noninfringing under prevailing patent law.

As is well-known, most important inventions will be patented *around* long before their patents expire (Mansfield 1987).

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In general, while the results vary by industry, the imitation-cost increases caused by patents are quite modest, and the speed of imitation is fairly rapid even with patents. Also, most patented products and processes would have been introduced even without patent protection. The only industry that appears to be a real exception to the rule that patents are relatively unimportant is the pharmaceutical drug industry. The most frequently cited reasons for that state of affairs are that unusually strong patents are obtainable in the chemical field, of which pharmaceuticals is a part, and that it is often difficult to invent around a pharmaceutical patent. The fact that the pharmeceutical industry is by far the most heavily regulated of all makes the importance of patents in it understandable (Hippel 1988; Winter 1989; Svetos 1996). This issue will be explored further in the following section.

Skeptics concerning the true effect of the patent system also point toward a number of factors, such as the inefficient allocation of resources due to the patent system, the prominent role of "patenting around," changes in the allocation of research funds, increased secrecy, substantial legal and administrative costs, an arbitrary incentive to focus on the sorts of research which are patentable, and differential effects depending on the stage of industry development. Besides, as will be shown in more detail, all innovations are not patented and conversely not all patents are innovations.

PATENTS AS ECONOMIC AND INNOVATION INDICATORS

There is an impressive array of studies using patent statistics as a proxy to the process of innovation and technical change. The main advantages of patent data for quantitative analysis are fairly obvious: they are easily available and relatively cheap; they provide plenty of technical and geographical information about the invention, the inventor and his employer; and, they come in nice time-series that can go back to the middle of the nineteenth century (even further back for some countries). In fact, it is readily acknowledged by most practitioners that the current popularity of patent data probably owes much more to the growing availability of machine readable data files and on-line databases, and to the easy statistical treatments they allow, than to a newfound value in their validity as measures of innovative outputs (Statistique Canada 1985; Basberg 1987; Griliches 1990; OCDE 1994).[3] But there are still many problems with the use of patent statistics as economic and innovation indicators that were identified long ago. They are usually classified under two broad categories of problems: *identification* and *intrinsic variability*.

Problems of identification are those that are related to the correct measurement of a phenomenon, in all places and at all times. In the particular case of patents, these problems are generally viewed as twofold: one, not all innovations are patentable; and not all patentable innovations are patented (Statistique Canada 1985). We will, however, add two other considerations under this umbrella: there are strong biases in the delivery of patents related to the type of innovation under consideration, the size of the firm that produced the innovation, and the industry of origin of the innovation; and second, there are important data gathering and classification problems that are not corrected within patent data.

[3]For a detailed survey of these databases, see OCDE (1994).

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Problems of intrinsic variability refer to the fact that patents differ considerably in their technical and economic significance and can therefore not be "weighted" appropriately. There are a number of drawbacks here: (1) some patents prove to have some economic value, whereas others will not be worth anything; (2) the purpose of some patents is purely defensive; and (3) patent requirements have evolved drastically over time and geographical space. Most authors using patent statistics usually acknowledge some of these problems and have come up with a variety of answers, ranging from the classic response that "patents are the best indicator available" to postulating a statistical relationship between the numbers of patents emitted and the true number of innovations in a given economy (Statistique Canada 1985; OCDE 1996). We will now look more closely at these various problems.

Many Inventions are Not Patentable

The boundary between what is and what is not patentable is sometimes fairly arbitrary and in some cases seems to reflect what can be feasibly administered by a patent office. Criteria will vary between countries, but the principle generally holds good that an invention can be patented only to the extent that it has a particular application in what economists normally think of as production.[4] Thus there can not be a patent upon an abstract philosophical principle, a mathematical algorithm, or a computer program, though a chip with a particular program coded into it might be patented. In Canada, scientific principles, theorems, simple ideas, ways of doing business, computer programs as such and medical treatments cannot be patented (OPIC 1994). Some very innovative things that can turn out to be of great economic value are therefore not patentable. This is especially true with new technologies where there might be some uncertainty as to the patentability of new inventions or innovations (Basberg 1987).

It has already been mentioned that a patent must theoretically be a description of an invention that is fully workable without further assistance from the patentee. This usually means that a patentable invention must be a physical result or a physical means of attaining some result, not a purely human means of attaining it. This brings in the question of local conditions and of tacit knowledge and technical know-how in innovative work. It is now well-known that the details of a process may vary greatly with the local conditions under which it operates or the purpose for which it is used, and that it is not always clear that an advance of knowledge can be put into words within the constraints of a patent application. Taylor and Silberston were thus told by many firms in the engineering fields that patent clearance on its own is seldom worth much compared with unpatented expertise:

> In most specific cases of selectivity in these fields that we investigated from the licensor's point of view, secret know-how or highly specific technical skills emerged as the effective barriers to imitation, and patents were rarely if ever a critical factor. (Taylor and Silberston 1973, p. 185)

As Winter also reminds us:

> Improvements in this sort of knowledge can occur, at the individual level, without conscious awareness of how improvement has been achieved or perhaps even of the

[4] As we have already seen, machines, manufactures, and compositions of matter, or combinations of these, as well as certain designs and genetically engineered organisms are patentable.

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> fact that improvement has occurred. Similarly, coordination improvements in organizations may occur for reasons that are imperfectly and diversely understood by the participants therein. Knowledge advances of these types fall outside the realm of statutory subject matter for patents. Furthermore, the requirement that a patent application contain "a written description of the invention . . . in such full, clear, and concise terms as to enable any person skilled in the art to which it pertains . . . to make and use the same" (35 U.S.C. sec. 112) is an extremely demanding requirement when even moderately severe difficulties in articulation are present. In effect, it demands that the application be a complete instruction book for a "person skilled in the art." The fact that instruction books are not generally an efficient means of conveying improvements in skills is resoundingly attested by the fact that how-to books have not yet rendered firsthand instruction obsolete. (The exclusion from protection of processes that require "a mental step to be performed" is another quite explicit bar to the protection of tacit knowledge.) (Winter 1989, p. 51)

It must, however, be kept in mind that "numerous inventions depending substantially for their implementation on unpatented know-how *are* patented and this represents a departure in practice from the law's intention" (Taylor and Silberston 1973, p. 8).

Most Inventions are Not Patented

An invention is likely to be protected in one way or the other if it is thought to have some economic value, but there are at least two alternatives; patenting and secrecy. And as Taylor and Silberston (1973, p. 186) put it long ago: "At the risk of undue generalization, we would say that the existence of unpatented manufacturing know-how seems an overwhelming factor." In short, not all patentable inventions are patented. Some inventors can rely on other technical and institutional factors to earn a return on their investment. In these situations, the cost of patents, the fear of litigation, risk of disclosure, and the ease of inventing around a patent all play a role. Other inventors might simply want their new product in the public domain as quickly as possible in order to set a new standard and to establish themselves as leaders in their branch of industry.

There are a number of ways by which inventors can protect their innovations. The most obvious one is through secrecy, especially when the risk of disclosure and patenting around are high. A product or process improvement can be kept secret through ordinary steps, such as placing the process off limits to non-employees and then limiting in various ways the security hazard inherent in the access provided to employees. Trade secrecy protection theoretically lasts indefinitely and does not require a costly registration process. Of course, no inventions will remain forever secret; in time, reverse engineering or employees changing jobs will put an end to this situation. Despite this, there are still a number of ways to try to slow down that process. Companies thus routinely require provisions in employment contracts that preclude employees from disclosing the companies' proprietary information, both during and after employment; publications by employees can be screened to prevent disclosure of proprietary information, etc. Probably the most famous example of trade secret protection is the formula for the syrup for Coca-Cola, which has been held secret for many decades.

But secrecy is not everything. In cases where technological advances are very rapid, difficult to police, or costly to copy, patent protection may not seem worthwhile.

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In many industries technology might in fact be progressing too rapidly and the lives of new products might prove to be so short that they may well be obsolete before a patent is issued. In this situation, inventions go unpatented because the patents would be literally valueless when issued. The *head start* of the inventor may be quite adequate to deter copyists, especially where industrial application of the invention is a relatively complicated matter. Other considerations, such as customers' *brand loyalty* or economies of scale, can also play a role in these situations.

The fact that firms in newly-developed and growing-product markets do not play a zero-sum game for some fixed amount of total sales is also well-known. Thus until the late 1980s, Digital Equipment Corp. (DEC) encouraged other companies to use its technology to make add-on products that would raise demand for its computer (Coy et al. 1993). The patent holder for a superior new product might also confront resistance from industrial customers who do not want to rely on a single supplier. Automobile manufacturers were thus unwilling to make the modifications to wheel rims necessary for adopting tubeless tires as long as such tires were available only from the original patentee, B.F. Goodrich. Only by conceding the invention to its competitors could B.F. Goodrich generate any demand for its new product (Rosegger 1986, p. 141).

There is also another important reason why some firms will not want to patent their innovations. As was mentioned earlier, a patent gives a patentee the right to exclude others from using it, but it does *not* give him the right to use it if it infringes on the patents of others. Hippel has argued that not patenting an innovation is usually a better option.

> For example, Fairchild Semiconductor has a patent on the so-called planar process, an important process invention used in the manufacture of integrated circuits. If firm *B* invents and patents an improvement on that process, it may not use its improvement invention without licensing the planar process from Fairchild and in turn that firm may not use the improvement either without licensing it from firm *B*. Thus, in rapidly developing technologies where many patents have been issued and have not yet expired, it is likely that any new patent cannot be exercised without infringing the claims of numerous other extant patents. Given this eventuality, the benefit of a particular patent to an inventor would very probably be diminished because the patentee might be prevented from using his own invention or might be forced to cross-license competitors holding related patents in order to practice his invention. (Hippel 1988, pp. 51–52)

Many social scientists relying heavily on patent data to study technical change have, however, come up with various results showing that the propensity to patent patentable inventions is rather high (OCDE 1996). Based on a survey of 100 firms, Mansfield (1987) has thus argued that between 66 and 87 percent of patentable inventions were filed for patents. A survey done by *L'Office européen des brevets* on European firms of up to 1000 salaried workers has shown that a quarter of these firms were trying to patent more than 90 percent of their patentable inventions, whereas another quarter were trying to patent between 50 to 90 percent of their patentable inventions. The PACE survey[5] has come up with results showing that 15 percent of firms try to patent between 80 and 100 percent of their product innovations, whereas 37 percent were doing so for less than 19 percent of theirs (OCDE 1996, p. 25).

[5]The European and Japanese follow-up to the Yale survey.

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It might, however, be argued that it is doubtful that these figures have any meaning whatever, because of the subjectivity involved in determining what is a *patentable invention*. Actually, it is possible to file any number of patents on the same invention as long as you file *terminal disclaimers* along with them so as not to extend the terms. There are also many things that are patentable but that are commercially worthless, so no one ever considers filing for patent protection. It is also the impression of this writer that far less than the amount of inventions that companies' employees come up with are patented, if only because the shop floor worker who comes up with an innovation in a company usually doesn't get the credit for it (for example, the engineer in charge of production will put his name on the patent instead of the name of the true originator).

A different kind of research on innovation also illustrates the problem. Through a number of interviews in the residential construction industry, Slaughter (1991; 1993) has documented all significant innovations relating to a single technology, the stressed-skin panel.[6] Of the 34 innovations[7] sampled, 28 were made by users and 6 by manufacturers. Eight of these user innovations in stressed-skin panels were commercialized by manufacturers, while 20 were not. More interestingly though, only 5 of the 34 innovations sampled were or would possibly be under patent protection. These were: a modified air-compression nailgun, a clip connection system, a cam-lock joint, a rolled steel joint, and the insecticide-impregnated foam core (Slaughter 1993, p. 85). In a similar type of reserarch on Silicon Valley's semiconductor industry, Rogers (1982, p. 118) has found that most of his respondents considered that "much technological information is not patented by private firms."

Bias in the Propensity to Patent

Many inventions are not or cannot be patented. There are, however, a number of biases in the propensity to patent which can be related to the type of invention that is patented, the size of the firm that is patenting, and the industry of the firm that is patenting.

Type of Invention: It is generally agreed that process innovations (i.e., mostly production methods and special techniques) are much less likely to be patented than product innovations, secrecy being deemed much more efficient to protect process innovation than the patent system (Statistique Canada 1985, p. 20; OCDE 1996, p. 44). Respondents to the Yale survey of R&D executives have thus pointed out that with a single exception (petroleum refining), patents were rated more effective in preventing product duplication than process duplication. On a seven point scale, two-thirds of the scores in the product column were above the midpoint level of 4 ("moderately effective"), while roughly two-thirds of those in the process column were below that level (Winter 1989, p. 48). The results of the PACE survey (OCDE 1996, p. 24) were even more drastic; according to this study, only 7 percent of the surveyed firms said that they frequently used patents for

[6]A stressed-skin panel is a *sandwich* of a solid core of plastic insulative foam laminated to the facing materials, where the facing materials or "skin" carry some portion of the building load. The panel acts similarly to an I-beam to distribute the load. The facing materials can be made of plywood, other structural wood sheets, gypsum board, or metal. The plastic foam core is not only a connecting web between the facing sheets to distribute the load, but is also a thermal insulating material.

[7]In this study, an innovation is defined as anything new actually used in a project (Slaughter 1993, p. 85).

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process innovations, whereas 57 percent said that only in very rare occasions would they try to patent process innovations.

Size of the Firm: The size of the firm is also an important factor in the propensity to patent. Although some authors have argued that patenting underestimates the innovation output of big firms, which appear to show a lower propensity to patent than their smaller counterparts[8] (Mansfield 1987), it is widely recognized that the patent system does not do much to encourage the lone inventor or the small firm and that it instead tends to make industry structures more rigid than they would otherwise be. There are many reasons for this situation, ranging from the huge amounts of money needed to use the patent system successfully (to file applications, to manage a portfolio of patents in many countries, to renew patents, to engage patent agents, and to sue alleged infringers in courts) and to the fact that small firms or lone inventors, unlike large firms, do not employ patent lawyers and other personnel solely for that purpose. Many simply cannot afford these costs or consider the expected return on their investment as uncertain or lower than the costs incurred.

As one critic has put it:

> There are many issues involved with the transfer of intellectual property. One is the time it takes to get a patent, the legal hassles, and the other negotiations that have to take place in any kind of intellectual property scenario. The intellectual property process often intimidates and impedes the entrepreneurial process and seemingly takes forever. (Ball 1992, p. 58)

One principal argument supporting this claim is the growth of patents held by corporations which rose in the United States from 18 percent at the turn of the century to more than 60 percent in the early 1970s (Silberston 1967). Recent studies also show that fewer than 700 firms in the United States now claim more than 60 percent of patents (OCDE 1996). Many critics have thus argued that patents are usually nothing more than *license to litigate* or even *protection money*. Although this is undoubtedly true in some instances, it should be pointed out that most of the evidence suggests that most firms do their best to avoid the cost of litigation.[9] There are a number of reasons for that, ranging from the large scope for compromise to the unlikelihood of achieving outright victory,[10] to the time and cost of a court hearing.[11]

Industry of Origin[12]: Besides differing according to firm size, the propensity to patent also differs across industries. This is mostly related to the possibility of "inventing around" patents and to the pace of innovation in a given industry, where an invention might be obsolete before the patent is granted. For example, it

[8]For example, small Canadian enterprises typically patented one invention per $275 million (in sales) in 1975. Large Canadian inventive enterprises usually patented one invention per $131 million (in sales) in 1975 (Ceh 1997, p. 69).

[9]This issue is more thoroughly dealt with in the section "Defensive Nature of Many Patents."

[10]During the 1960s and 1970s, 72 percent of all litigated patents were declared in various courts to be invalid (Edson 1993, p. 25).

[11]Legal fees in patent-infringement suits can run a half-million dollars or more, and long delays are common.

[12]It should, however, be pointed out that there are a number of problems with the usual industrial classification. This topic will be addressed in more detail in the subsection "Methodological Problems in Patent Data."

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appears that patents in chemicals are much stronger than in those of mechanical inventions (Hippel 1988; Winter 1989; Edson 1993).[13] These sectoral biases are not new, although there have been a number of changes in the industries which were better covered by the patent system (MacLeod 1988).

These days the pharmaceutical industry comes out on top in every study of the propensity of industries to patent, while fields where technology is changing rapidly, especially in the area of electronics, are ranked at the bottom (Taylor and Silberston 1973; Winter 1989; OCDE 1994 and 1996). Thus according to a survey of 100 firms covering the years from 1981 to 1983 inclusively, but excluding very small firms, patent protection was judged to be essential for the development or introduction of 30 percent or more of the inventions in only two industries, pharmaceuticals and chemicals (Mansfield 1987). In another three industries (petroleum, machinery, and fabricated metal products), patent protection was estimated to be essential for the development and introduction of about 10 to 20 percent of their inventions. In the remaining seven industries (electrical equipment, office equipment, motor vehicles, instruments, primary metals, rubber, and textiles), patent protection was estimated to be of much more limited importance. Indeed, in office equipment, motor vehicles, rubber and textiles, the firms were unanimous in reporting that patent protection was not essential for the development or introduction of any of their inventions. The PACE survey has similarly shown that 54 percent of firms in the pharmaceuticals industry try to patent more than 80 percent of their product innovations, whereas virtually no firm in the basic metal sector has anything to do with patents (OCDE 1996, p. 43). Furthermore, 77 percent of all firms surveyed only try to patent between zero and 19 percent of their product innovations; and the percentage of firms surveyed that never use patents is estimated to be 10 percent in Germany, 15 percent in Italy and in small European countries, and 17 percent in the United Kingdom (OCDE 1996, p. 44). It can also be pointed out that public institutions such as universities and research laboratories used to show a much lower propensity to patent than private institutions such as firms and private laboratories, but that they have in recent years become much more active players in that respect (OCDE 1996; Svetos 1996).

Methodological Problems in Patent Data

There are a number of methodological problems in the supposedly neutral information contained within patent data. There is about no consistent practice with respect to the names to which corporate patents are assigned. As was pointed out, corporate patents can be signed by a designated lawyer or engineer, not by the actual inventor (who may be a shop floor worker). The location of the origin of an invention is also problematic. For example, when patent statistics are used to analyze the spatial distribution of innovative activity, a locational problem typically arises; namely, the risk that patents generated in the area analyzed may be granted to firms or subsidiaries in other locations and that patents granted to a firm located in a specific area may actually be related to innovations generated elsewhere. The risk is especially significant when large multi-plant corporations are concerned (Antonelli 1986).

[13]There have, of course, been a number of exceptions. The Polaroid and the xerography processes are cases in point.

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Another serious problem has to do with industrial classification and the inter-industrial flow of knowledge. One aspect of the problem here is that firms frequently change their principal Standard Industrial Classification from one census year to the next, depending on which of the many products they make were in greatest demand at the time of the most recent census. The other is that many, if not most, technologies are linked across industries. Such inter-industry linkages mean that advances in one industry will depend on progress in a second and will set conditions for the evolution of a third.

If squeezing a firm into a somewhat arbitrarily defined industrial sector is often problematic, it usually pales in comparison with the classification of patents by industry. To put this succinctly, patent classification and industry classification are not comparable in any direct way. The industry of origin for a patent is not known by the patent office, because neither the inventor nor the firm for which he works (if any, of course) is asked to identify themselves by industry. All that the patent office usually knows is the technical nature of the invention. The United States Patent Office classifies patents into about 400 main classes with about 100,000 subclasses. This classification system is based primarily on technological and functional principles and is only rarely related to economists' notions of products or well-defined industries.[14] As Jacob Schmookler noted long ago:

> [A major] deficiency arose from the fact that I could not assign many inventions to a single industry. In part this resulted from my own ignorance, but often it reflected the interindustry character of technology. Thus, a given improvement in the diesel engine may be used in generating electricity or driving a locomotive, a given bearing may be used in a shoemaking machine or a lawn mower, and a given knife may be used in harvesting or in kitchens. In consequence, the patent statistics used below generally do not include power plant inventions, electric motors, bearings, or other instruments or materials whose industry of origin was either multiple or simply not evident. Unfortunately, this means that the railroad data do not include inventions in the field of the steam or diesel engines, and that neither the farm nor the construction data include inventions on tractors. (Schmookler 1966, p. 23)

Griliches (1990, p. 1666) also adds some examples of his own. Thus a subclass dealing with the dispensing of liquids contains both a patent for a water pistol and for a holy water dispenser. Another subclass relating to the dispensing of solids contains patents on both manure spreaders and toothpaste tubes.

The problem of classification is thus real. Before any classification is attempted, the investigator has to face the inherent ambiguity of the task. Does he want to assign the invention to the industry in which it was made (industry of origin), to the industry that is likely to produce it (producing industry),[15] or to the industry that will use the resulting product or process and whose productivity may thereby benefit (destination or industry of use)?

> Consider, as an example, the case of a new plow invented in a chemical firm's research laboratory as part of its project on new combined fertilizer and tillage systems. It

[14] Griliches (1990, p. 1666) even adds that the economist's notion of a well-defined industry "may be a mirage anyway."

[15] Perhaps the most valiant attempt at attributing an industry of origin to patents is Scherer (1987a).

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> depends on what question is to be asked of the data. If we want to study the returns to R&D expenditures we may wish to count it in the chemical industry whence the money came to develop it. If we want to analyze the impact of technological change on the rate of investment, on the sale of new equipment, we may wish to count it in the farm equipment industry. If we are interested in its effects on measured productivity we are more likely to count it as being relevant to agriculture. This difference in questions reflects itself also in different classification strategies pursued by different researchers. (Griliches 1990, p. 1666)

There has always been a number of strategies to deal with this problem, but most of these have proven to be arbitrary and lead to a number of serious problems, most notably double counting (OCDE 1996). It can, however, be noted that for the last 25 years the Canadian patent office has compiled data on the "potential industries of use" for each patent. But to quote a respected writer on this topic: "most of the basic questions of classification still remain to be answered" (Griliches 1990, p. 1667).

Problems of Intrinsic Variability

As was mentioned earlier, besides problems of identification, there are also a number of problems of intrinsic variability with the use of patents as economic indicators. The study of Thomas Edison's patents will afford a first illustration. Israel and Rosenberg (1991) have compared the information available about Edison's inventions from artifacts and notebooks with the timing and descriptions of those inventions in patent specifications. They made the following observations: (1) Edison described and drew things that he could not construct; (2) he did not always patent aspects of his work that seem significant in retrospect; (3) the nature of the patent examination process could lead to very misleading claims in the issued patent without recourse to the full patent application record[16]; (4) Edison did not himself create his applications in their final forms and sometimes his attorneys "garbled almost to incoherence" several of his specifications; and (5) the patent application process can also lead to incorrect assumptions regarding time of inventive activity—even the date of filing[17] and execution[18] (when the inventor

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[16] Israel and Rosenberg (1991, p. 1096)

> In Edison's application for a siphon recorder for his automatic telegraph he initially claimed that the device would minimize the use of chemicals, a key feature of this instrument. On being notified that this claim had been registered for a previously patented device, Edison changed his claim to cover the placement of the receiving wires. This aspect of the invention allowed him to minimize the use of chemicals but had been only mentioned in passing in the original application. The patent as issued consequently tells the reader nothing about the real purpose of the instrument.

[17] Edison's attorneys sometimes held an application for months before filing, for no obvious reason. The modern tale of Stanley Cohen and Herbert Boyer, usually referred to as the modern fathers of biotechnology, can also illustrate this point. While collaborators at Stanford, they came up with inventions with regard to the recombinant DNA process in unicellular organisms and products made by recombinant DNA techniques. These inventions were developed without thought as to their patentability and it was nearly too late to file when an administrator at Stanford read about their research and contacted Cohen (Svetos 1996).

[18] Israel and Rosenberg (1991, p. 1098)

> Although Edison rushed to his patent attorney to cover the development of his electromotograph on the day he realized its uniqueness, he executed the application for his universal private-line printer, a fairly successful instrument, a full year

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signs the application) have sometimes proven deceptive. The Edison case, although admittedly an ancient one, is a cautionary tale, and many of the same problems are still present in today's patent data.

In the remainder of this section, we will look more closely at the most serious problems of intrinsic variability: some patents prove to have some economic value whereas others will not be worth anything, the purpose of some patents is purely defensive, and patent requirements have evolved drastically over time and geographical space, making international and historical comparisons impossible.

Heterogeneous Economic Value of Patents

Obviously, if patent data are to have any practical value as indicators of technological change, it is necessary to show that the number of patents which indeed do lead to innovations is significant. But the fact that patents differ greatly in terms of their positive economic significance (i.e., the capacity of the innovation they describe to create true wealth) is well acknowledged and has been addressed in a number of ways (Griliches 1990, p. 1679; OCDE 1996, p. 25). The problem here, however, is that there are still no satisfactory measures of the significance of individual patents. Taken as a whole, patents are at best representatives of technological potential and not of technological achievement. It is therefore not an overstatement to say that most patents are almost valueless and that they end their lives unused in the files of corporations, patent offices, or lone inventors. To quote one strong believer in the use of patents as economic indicators: "Evidence . . . shows that the vast majority of patents is worth very little and that the bulk of the inventive system is based on a relatively small number of very valuable patents" (Griliches 1990, p. 1699). In 1869, United States Commissioner of Patents Samuel S. Sparks estimated that 10 percent of all patents had commercial value. Although nearly a century later economist Jacob Schmookler estimated the figure was 50 percent, many modern commentators still agree that Sparks's estimate holds true even now (Basalla 1988, p. 69). Some even write that the true number of economically worthless patents is probably closer to 95 percent (Poirier 1997).

There is, however, a more general issue at stake here, which is the true nature of the human creative process and its relation to the patent system. In short, it might be true that some inventions form the basis of entirely new industries or radically change existing technologies. These are very rare occurrences and may prove nothing more than an arbitrary selection of a basic intellectual breakthrough which remained for a long period afterwards far from a state of technical feasibility. Others provide small improvements in minor devices. The remaining, and largest, group have little or no economic impact (Basalla 1988, p. 115).

A point that is now well taken by most analysts of technological change is that innovation does not proceed through major breakthroughs by specific individuals, but through small and cumulative improvements that yield over time novel and useful artifacts (Rosenberg 1982). The patent system, however, is built on an

after beginning commercial production. The reasons for the difference between these two cases are fairly clear—the former was an unexpected, potentially important new development, whereas the latter was developed under a contract with a company that controlled nearly all patents in printing telegraphy and was thus virtually immune to danger from other inventors. Between these extremes, though, are many instances of patent applications and caveats executed weeks or even months after Edison recorded their conception or development in his notebooks.

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entirely different view of technological change. Within it, an invention is uniquely identified with its inventor and its associations with existing artifacts are obscured. All of patent law is based on the assumption that an invention is a discrete and novel entity that can be assigned to the individual who is determined by the courts to be its legitimate creator. Thus, the patent system converts the continual stream of made things into a series of distinct entities and has historically led a number of well-known inventors such as Samuel Morse, Eli Whitney, and Thomas Edison to lie in court about the true nature of their inventions (Basalla 1988, pp. 60–61). But despite its intellectual underpinning, the patent system cannot entirely obscure the true nature of technological change. F.M. Scherer thus noted that: "as the bleary-eyed reviewer of some 15,000 patent abstracts in connection with research . . . [he] was struck by how narrowly incremental (adaptive?) most 'inventions' are" (Scherer 1987b, p. 124). Even the *Canadian Intellectual Property Office* had to confess that 90 percent of all patented inventions are minor improvements on existing patented devices (OPIC 1994, p. 8). And even though many technical people might believe what they have been told, i.e., that in the past there were revolutionary changes, it usually doesn't accord with their experience.

> Spokesmen in a number of firms said that in recent years there have been no technical developments of real importance in their fields from which patents have barred them. Several ventured the view that the era of the "master" or "basic" patent has largely gone and, although others (particularly in chemicals) would not agree entirely with this, it seemed commonly accepted among engineering and electronics firms that basic patents of great commercial significance (comparable to Western Electric's transistor patents in the 1950s or, on a lesser scale, the pre-war patents on xerography) are nowadays extremely rare.
>
> A second and not unrelated answer was encountered typically among manufacturers of plant and machinery: this was that in lines of activity where the basic technology is well established and has passed into the public domain, firms attempt to secure recognition for their products through variations in design and minor improvements which are either not patentable, or if patented, can be easily circumvented. (Taylor and Silberston 1973, p. 184)

Defensive Nature of Many Patents

Most social science studies that refer to patent use or to patents as a proxy of innovative activity typically do not emphasize what might be termed the *defensive* uses of patents, i.e., that patents can be used as bargaining chips or as means of reducing competition. It is thus well-known that many corporations protect the technology they are currently utilizing by accumulating hundreds of patents that form a *protective fence* around their products and processes. They are supposed to make it increasingly difficult for competitors to invent around, but the real goal of these patents, whose vast majority will remain undeveloped, is often to provide a shield behind which a corporation can retreat and protect itself from the potential threat of innovating competitors.

James Watt, for example, held a patent that covered noncondensing engines "wrought by the force of steam only." This claim effectively blocked the development of a high-pressure engine, even though Watt himself firmly opposed this and did not plan to develop one (Mokyr 1990, p. 247). Nineteenth-century bicycle manufacturer Albert Pope sought from the outset monopolistic protection by

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purchasing virtually every patent connected with the bicycle, some dating from the velocipede craze of the 1860s. By 1881 he had secured a patent monopoly that would not begin to deteriorate until 1886. Until he lost his patent position, Pope extracted a fee of $10 per bicycle from other manufacturers. When he first began selling bicycles, two other firms also made high-wheelers, yet his patent monopoly helped drive both companies out of business (Hounshell 1991, p. 199). The patent conflict between Thomas Edison's and Alexander Graham Bell's patents is well-known[19]; actually Western Union had encouraged the then young Edison "to patent as many different designs as possible in order to block rival companies from exploiting the systems of other inventors" and had on that occasion given him financial support to build his new laboratory at Menlo Park in the spring of 1876 (Gorman and Carlson 1990, p. 147). Indeed, the rise of almost all industrial research laboratories has been closely related to patent struggles between corporate rivals (Basalla 1988, pp. 124–29).

To understand the defensive nature of many patents an important feature must first be pointed out. The patent system places the burden of detecting infringers and suing for redress on the patentee. It is probably fair to say that such suits are notoriously long and expensive and that both defendants and plaintiffs tend to avoid them assiduously. It has been pointed out that although 11,962 patents were granted in the United Kingdom between 1770 and 1850, only 257 patent cases came before the courts (Dutton 1984, p. 71). Hippel (1988, p. 53) has described what he perceives to be a typical "avoid the courts" situation:

> Firm A's corporate patent department will wait to be notified by attorneys from firm B that it is suspected that A's activities are infringing B's patents. Because possibly germane patents and their associated claims are so numerous, it is in practice usually impossible for firm A—or firm B—to evaluate firm B's claims on their merits. Firm A therefore responds—and this is the true defensive value of patents in industry—by sending B copies of "a pound or two" of its possible germane patents with the suggestion that, although it is quite sure it is not infringing B, its examination shows that B is in fact probably infringing A. The usual result is cross-licensing, with a modest fee possibly being paid by one side or the other. Who pays, it is important to note, is determined at least as much by the contenders' relative willingness to pay to avoid the expense and bother of a court fight as it is by the merits of the particular case.

It must, however, be pointed out that Hippel's statement was first written in a journal article in the early 1980s, when courts were much more hostile to the patent system than they have become in recent years. It has subsequently been argued that the more recent pro-patent sentiment and the legal climate of American courts have made patents more valuable in a company's asset inventory (Edson 1993).

There have historically been a number of drawbacks to a system where patents challenged in court were likely to be held valid, especially following the radical shift in the granting of patents from inventors to corporations. A classic argument is that one person or corporation may gain control over a large number of patents, and then attempt to acquire others in order to dominate an industry, excluding competitors from the field by preventing them from using alternative processes.

[19]The legal battle was, however, waged between Western Union and the American Bell Telephone Company.

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Another means whereby large firms may gain control through patents is to acquire licenses on the patents of weaker firms by threatening to oppose the grant of their patents or even to petition for their revocation in the courts. The expense of such an action is often beyond the means of small firms—and certainly of the vast majority of lone inventors—who feel compelled to grant the licenses concerned. Other devices with monopolistic consequences are the accumulation of patents through time in order to perpetuate the exclusive position of a company even after the original important patents have expired.[20]

It is thus widely believed that the cost of patent litigation is often enough to intimidate lone inventors and small businesses or drive them out of the field regardless of the merit of their infringement case. It has often been said that for every inventor who prevailed in court against a big firm, or even got to plead his case, hundreds have lacked the stamina or finances to wage the arduous, expensive, and risky battle required. Many inventors over the years have also reportedly given up their court battles in frustration and many victories by the lone inventors have proven to be Pyrrhic, with litigation costs exceeding settlements.[21] Among the famous inventors who were destroyed by patent litigation were the flying shuttle's inventor John Kay, the engineer Jonathan Hornblower, and Charles Goodyear, the inventor of the rubber vulcanization process. Eli Whitney's patent wars over the cotton gin led to his arrest by his opponents and almost bankrupted him. The Foudrinier brothers, who introduced mechanical papermaking into Britain, went bankrupt in 1810 and spent much of the rest of their lives in prolonged and expensive patent litigation (Mokyr 1990, p. 249).

The relationship between the small inventor or firm and big corporations deserves closer examination. Taylor and Silberston who studied this question most carefully have given a balanced picture.

> Very few of those [big firm managers] consulted could recall instances of inventions submitted from individuals or very small firms that had been accepted, although one or two isolated cases were mentioned to us, but all said they were ready to welcome promising cases. Most of the inventions submitted are relatively simple-minded, although some show genuine technical expertise or ingenuity, and the main reasons for refusing to take them up are either that the idea is an old one or that it is simply not a commercial proposition. So far as we could tell, there seems no substance at all to the claim that the small man receives scant attention from the large firm, much less that the large firm attempts to pirate the small man's inventions after showing him the door. (Taylor and Silberston 1973, p. 322)

Taylor and Silberston (1973, p. 102) also mentioned that "the adverse publicity that tends to attach to a large company involved in a court action, especially where its opponent is an individual or a very small firm" always acts as a powerful deterrent against unethical behavior.

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[20]It is worth noting that under United States laws, building a protective fence through a company's own R&D efforts is legal, whereas buying up other firms' patents may be considered a violation of the law (Rosegger 1986, p. 145).

[21]A famous case in the United Kingdom was *Killick v. Pye*, where the winner went bankrupt after her action (Taylor and Silberston 1973, p. 327).

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If it is true that most large firms use their patents in a somewhat legitimate manner, there have undoubtedly been cases where large firms have abused the system at the expense of small firms. The reverse is also true, although it is doubtful that these cases are very numerous.[22] It must, however, be noted that the number of actions between giant firms has soared in the last decades, especially between American and European firms on the one hand and their Japanese competitors on the other. Thus following its winning lawsuits against Korean and Japanese semiconductor companies, Texas Instruments has been receiving millions of dollars in licensing fees on patents that the company never developed into products of its own (Auriol and Pham 1993; Coy et al. 1993; Edson 1993).

Evolution of Patent Requirements over Time and Space

The Evolution of National Patent Systems: Patent systems vary greatly across countries and, to a large extent, over time because of judicial, geographical, economical, and cultural factors.[23] Even the OCDE has to conceded that international comparisons of the number of patents delivered in each country are meaningless (OCDE 1994, p. 17).

Edison's patents will once again afford an illustration. In the nineteenth century, British and Canadian patent law allowed far broader coverage in a single patent than did American law. Consequently, Edison applied for system-wide protection for his quadruplex telegraph and electric lighting with specifications that revealed the relations of components that he had to patent separately in the United States. It has also been pointed out that foreign patents also may be indicative of differences in competitive environments. Edison thus patented a telephone switchboard in Britain, but not in the United States (Israel and Rosenberg 1991, p. 1100).

Generally in terms of costs and procedures, the Japanese patent system is designed to encourage innovators to disclose strategic information sooner than the American system. On the other hand, American patents used to be much more detailed than their Japanese counterparts due to the fact that until recently the Japanese filed *single claim* patents, whereas in other countries each patent contains several claims. United States protection is broader than in most other countries, particularly Japan, partly due to the doctrine of equivalents, which can broaden protection beyond the claims in the patent according to similarity of function (Ordover 1991; Scotchmer 1991; Callon et al. 1993; OCDE 1994). And although there is a European Commission on Patents, there are still important differences between European countries (Auriol and Pham 1993). As one Italian researcher has put it: "Italy belongs to the group of countries where the Patent Office's examination is essentially based on formal aspects and not on the evaluation of the novelty of the invention" (Sirelli 1987, p. 158).

[22]These actions by small firms or inventors are facilitated by "first-to-invent" patent system. Many authors have also written about "submarine patents," i.e., legal torpedoes issued to obscure inventors who convince the Patent Office that they had an idea first and then sock corporate giants for millions in royalties. To be more specific, a submarine patent is one that an inventor files, say, in 1950, and for which he keeps spawning continuations and divisionals to keep it alive, but secret for decades, while in the meantime industry independently develops and implements these ideas. Much later, say 1980, the patent finally issues, and surfaces like a submarine to make it now illegal to practice what has been done for many years.

[23]For a brief comparison of the European, American, and Japanese patent systems, see OCDE (1994).

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A major philosophical difference between patent systems is the first-to-file versus the first-to-invent provision. The United States, along with Jordan and the Philippines, have a first-to-invent system under which an individual applicant for a patent must prove that he had the idea first, not simply that he won the race to the courthouse. He can assert this priority to the invention at any time. He is entitled to a patent if thereafter he has not suppressed, abandoned, or concealed the invention. This philosophy, which has guided the United States patent system since Jefferson, was established to protect the inventor who lacks the resources to keep up a stream of patent applications merely to invoke their priority (Edson 1993). The rest of the world has, however, adopted a first-to-file system on the contention that it better serves the public because it is simpler and conforms with the systems in almost all other countries. Moreover, it is argued that it spurs inventors to file for patents earlier and to disclose their inventions sooner, thus speeding the progression from idea to finished product. There are, of course, a number of drawbacks to this system, for example, the unlikely possibility of someone stealing the profits of an invention from the true inventor by beating him to the courthouse steps.[24] A more likely outcome is that patents will be put in very general terms in order to cover as much ground as possible.[25] The most plausible result, though, is an astronomical number of defensive patents and the litigation or licensing that will result from this.

There are also a number of other differences between countries having to do with pre-grant disclosure (i.e., the requirement that a patent "lay open" for a length of time after filing), pre-grant opposition (i.e., third parties can oppose the granting of a patent before it is delivered), licensing, royalties, etc. (Ordover 1991). Other arrangements are also possible. For example, in the pharmaceutical realm, Indian officials only grant patents on processes and not on products (Eswaran and Gallini 1994). There can also be differences that are cultural and not technical. For example, Japanese business culture is said to have valued patents much more than elsewhere in the post-war decades.

The filing and granting rates vary considerably between countries for a variety of reasons. In Japan in 1990, 380,000 patents were filed, while there were only

[24]An interesting historical case is that of Guglielmo Marconi who, upon moving to England in 1896, "immediately and dramatically [applied and received] a patent on a method of transmitting signals by means of electrical impulses." This patent, the first issued anywhere in the world for radio telegraphy, encompassed virtually the entire technological application of the scientific work of Maxwell and Hertz. Marconi brought little that was new or original to the patent, but he was the first to claim existing methods, equipment, and circuits as *property*. Under British law this claim was all that was needed to justify his right to a broad patent covering electromagnetic signaling (Basalla 1990, p. 100). More recently, a biotechnology firm, Agracetus, has been given patents on all genetically engineered cotton and soybeans, regardless of the process used to engineer them or the traits engineered (Svetos 1996).

[25]As one British patent specialist in a pharmaceutical firm put it more than a quarter of a century ago:

> It is rare for the complete [specification] to contain a really full and adequate disclosure for commercial operations but this is not because of secretiveness. Rather it is an inevitable result of the "first to file" system. Under this, it is essential to obtain an early priority date and invariably commercial exploitation will not take place for three or four years, and in the pharmaceutical field often five to ten years. (Taylor and Silberston 1973, p. 95)

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160,000 in the United States the same year (Auriol and Pham 1993). The granting rate has been over 90 percent in France (until the mid-1970s), about 80 percent in the United Kingdom, and only about 35 percent in Germany. It has varied in the United States from a low of 58 percent in 1965 to a high of 72 percent in 1967 (Griliches 1990, p. 1663). As we have seen, this can also be explained by differences in the procedures and resources of the various patent offices, therefore implying differences in the average quality of a granted patent across countries and periods. In short, these numbers don't mean anything.

Historical Changes in Patent Systems: A patent is granted if it passes certain minimal standards of novelty and potential utility. These standards, however, can change over time, both as a result of changes in perception of what is an innovation and because of changing applications pressure on a relatively fixed number of patent office workers.[26] Basberg (1987, p. 135) has pointed out that three conditions must be met for a long and complete time-series of patents to have any value: first, the quality of an average patent must remain more or less unchanged; second, the relationship between patents and inventions in a chosen area must remain constant; third, attitudes as to the use of the patent system must remain substantially constant. It is doubtful that these preconditions are often met.

In discussing the incestuous relationship between the Munn & Co. Patent Agency—which was also the owner of *Scientific American*—and the United States Patent Office in the middle of the nineteenth century, noted historian of technology Eugene Ferguson has pointed out that:

> *Scientific American* soon became the leader and chief member of the patent lobby, bringing whatever pressure it could command for more examiners and less rigorous examination of applications. The law that reformed the Patent Office in 1836 gave examiners no clear guidance in their decisions regarding the merits or novelty of an invention. (Ferguson 1989, p. 56)

Moreover, a change in the resources of the Patent Office or in its efficiency will typically introduce changes in the lag structure of grants behind applications, and may produce a rather misleading picture of the underlying trends. It has thus been argued that the decline in the number of American patents granted in the 1970s was almost entirely the result of the fluctuations in the Patent Office, culminating in the sharp dip in 1979 due to the absence of a printing budget for the approved patents (Griliches 1990, p. 1690). It has also been pointed out that due to understaffing, the officials of the United States Patent Office have had a tendency to interpret the usefulness criterion so loosely that patent applications have rarely been turned down for failure to meet the requirement. In fact, it has been said that only the idea for a perpetual-motion machine would likely to be turned down (Rosegger 1986, p. 131).

The use of patent data as a proxy for inventive activity has a long history. There are many reasons to justify their use, from their availability to the fact that they are, by definition, related to inventiveness and that they appear to be based on an objective and only slowly changing standard. There are, however, a host of identification and intrinsic variability problems in these statistics. For example, it is highly plausible that patent counts in a field of industry may decline while the

[26] For a more detailed introduction to this topic, see Cooper (1991a).

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underlying innovative activity may be increasing; or on the contrary, that the number of patents issued in one field of industry may rise because a small number of firms are building their patent war chest. To sum up the main deficiencies in the use of patent data as economic and innovation indicators: (1) not all innovations are patentable; (2) not all patentable innovations are patented; (3) there are strong biases in the propensity to patent depending on the industry of origin, the size of the firm and the type of invention; (4) there are important reliability problems in patent data; (5) some patents prove to have an economic value, but most do not; (6) many patents are of a purely defensive nature; and (7) patent requirements have evolved drastically over time and geographical space. As was mentioned, most studies using patents as economic and innovation indicators treat very lightly the key problems in those statistics.

A number of ways of improving patent statistics have been suggested over the years,[27] but in the eyes of this writer, none has been able to overcome the subjectivity involved in assessing the quality of a patent. There are also other important problems in the data used in these studies, most notably that typically only large firms (or more specifically people in charge of patenting in these firms) or atypical creative geniuses are thoroughly studied. Innovation done in small firms or by more typical inventors who cannot afford the cost of a patent is therefore usually left out.

Austrian economists have long been hostile to the use of economic statistics (Rothbard 1993), but their epistemological claims have not been echoed in the mainstream of the profession which, for a number of reasons, has always been fond of patent statistics. The purpose of this article was therefore to demonstrate that, even on strictly empirical grounds, the drawbacks associated with patent statistics are nothing short of major and that even in the best circumstances, these data only give us a partial picture of the technological potential of a small number of innovations. Doing empirical studies of innovation is a worthy goal, but this does not justify the use of bad indicators on the grounds that they are the only ones that fit well with the dominant methodologies.

REFERENCES

Antonelli, Cristiano. 1986. "Technological Districts and Regional Innovation Capacity." *Revue d'économie régionale et urbaine* 5:695-706.

Auriol, Laudeline, and François Pham. 1993. "Les brevets: données et enjeux." *Problèmes économiques* 2336: 24-27.

Ball, James A. 1992. "Thinking Spinoffs in the 1990s: The Emerging Role of the Department of Defense in Technology Transfer." In *Technology and U.S. Competitiveness: An Institutional Focus*. W. Henry Lambright and Dianne Rahm, eds. New York: Greenwood Press.

Basalla, George. [1988] 1990. *The Evolution of Technology*. Cambridge, U.K.: Cambridge University Press.

Basberg, Bjørn L. 1987. "Patents and the Measurement of Technological Change: A Survey of the Literature." *Research Policy* 16:131-41.

Callon, Michel, Jean-Pierre Courtial, and Herve Penan. 1993. *La scientométrie*. Paris: Presses universitaires de France (Que sais-je? 2727).

Ceh, S.L. Brian. 1997. "The Recent Evolution of Canadian Inventive Enterprises." *The Professional Geographer* 49, no. 1:64-76.

[27] For a concise summary, see Basberg (1987).

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Cooper, Carolyn C., ed. 1991a. "Special Issue on Patents and Invention." Technology and Culture 32, no. 4:837–1101.

——. 1991b. "Making Invention Patent." *Technology and Culture* 32, no. 4:837–45.

Coy, Peter, John Carey, and Neil Gross. 1993. "The Global Patent Race Picks Up Speed." *Business Week*, August 9. Pp. 57–58.

Dutton, Harold Irvin. 1984. *The Patent System and Inventive Activity During the Industrial Revolution 1750–1852*. Manchester, U.K.: Manchester University Press.

Edson, Lee. 1993. "Patent Wars." *Across the Board* (April): 24–31.

Eswaran, Mukesh, and Nancy Gallini. 1994. "The Role of Patent Policy in Shaping the Nature of Technological Change." *NBER Working Paper No. 9417*. Cambridge, Mass.: National Bureau of Economic Research.

Ferguson, Eugene S. 1989. "Technical Journals and the History of Technology." In *In Context: History and the History of Technology. Essays in Honor of Melvin Kranzberg*. Stephen H. Cutcliffe and Robert C. Post, eds. Bethlehem, Penn.: Lehigh University Press.

Gorman, Michael E., and W. Bernard Carlson. 1990. "Interpreting Invention as a Cognitive Process: The Case of Alexander Graham Bell, Thomas Edison, and the Telephone." *Science, Technology, and Human Values* 15, no. 2:131–64.

Griliches, Zvi, ed. 1987. *R&D, Patents, and Productivity*. Chicago: University of Chicago Press.

——. 1990. "Patent Statistics as Economic Indicators: A Survey." *Journal of Economic Literature* 28:1661–707.

Hippel, Eric von. 1988. The Sources of Innovation. New York: Oxford University Press.

Hounshell, David A. [1984] 1991. *From the American System to Mass Production, 1800–1932*. Baltimore, Maryland: The Johns Hopkins University Press.

Israel, Paul, and Robert Rosenberg. 1991. "Patent Office Records as a Historical Source: The Case of Thomas Edison." *Technology and Culture* 32, no. 4:1094–101.

Jaffe, Adam B., Manuel Trajtenberg, and Rebecca Henderson. 1993. "Geographical Localization of Knowledge Spillovers as Evidenced by Patent Citations." *Quaterly Journal of Economics* 108:577–98.

Jaffe, Adam B., and Karen Palmer. 1996. "Environmental Regulation and Innovation: A Panel Data Study." *NBER Working Paper No. 5545*. Cambridge, Mass.: National Bureau of Economic Research.

Lanjouw, Jean Olson, Ariel Pakes, and Jonathan Putnam. 1996. "How to Count Patents and Value Intellectual Property: Uses of Patent Renewal and Application Data." *NBER Working Paper No. 5741*. Cambridge, Mass.: National Bureau of Economic Research.

Mansfield, Edwin. 1987. "Intellectual Property Rights, Technological Change, and Economic Growth." In Walker and Bloomfield 1988. Pp. 3–26.

MacLeod, Christine. 1988. *Inventing the Industrial Revolution*. Cambridge, U.K.: Cambridge University Press.

Mokyr, Joel. 1992. *The Lever of Riches. Technological Creativity and Economic Progress*. New York: Oxford University Press.

Oakman, Bruce. 1986. "Patents: An Austrian Perspective." *Economic Papers (The Economic Society of Australia)* 5, no. 1:74–81.

OCDE. 1994. *Les données sur les brevets d'invention et leur utilisation comme indicateurs de la science et de la technologie* (Manuel brevet 1994 No 66). Paris: Organization de coopération et de développement économique.

OCDE. 1996. *Innovations, brevets et stratégies technologiques*. Paris: Organization de coopération et de développement économique.

OPIC. 1994. *Le guide des brevets*. Ottawa: Office de la propriété intellectuelle du Canada, Ministère des approvisionnements et services.

Ordover, Janusz A. 1991. "A Patent System for Both Diffusion and Exclusion." *Journal of Economic Perspectives* 5, no. 1:43–60.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Poirier, Jean-François. 1997. "La recherche de brevets." *Le prototype* 2, no. 1:3.

Rodgers, Everett M. 1982. "Information Exchange and Technological Innovation." In *The Transfer and Utilization of Technical Knowledge*. D. Shahal, ed. Lexington, Mass.: Lexington Books. Pp. 417–61.

Rosegger, Gerhard. 1986. *The Economics of Production and Innovation. An Industrial Perspective* 2nd ed. Oxford, U.K.: Pergamon Press.

Rosenberg, Nathan. 1982. *Inside the Black Box, Technology and Economics*. Cambridge: Cambridge University Press.

Rothbard, Murray N. [1962] 1993. *Man, Economy, and State: A Treatise on Economic Principles*. Auburn, Ala.: Ludwig von Mises Institute.

Scherer, Frederic M. 1987a. "Using Linked Patent and R&D Data to Measure Interindustry Technology Flows." In Griliches, ed. 1987.

———. 1987b. "Comment" (on R.E. Evenson "International Invention: Implications for Technology Market Analysis"). In Griliches, ed. 1987. Pp. 123–26.

Schmookler, Jacob. 1966. *Invention and Economic Growth*. Cambridge: Harvard University Press.

Scotchmer, Suzanne A. 1991. "Standing on the Shoulders of Giants: Cumulative Research and the Patent Law." *Journal of Economic Perspectives* 5, no. 1:29–41.

Silberston, Aubrey. 1967. "The Patent System." *Lloyds Bank Review* 84:32–44. Reprinted in *Economics of Information and Knowledge*. D.M. Lamberton, ed. 1971. Harmondsworth, U.K.: Penguin Books. Pp. 224–38.

Sirelli, Giorgio. 1987. "Patents and Inventors: An Empirical Study." *Research Policy* 16:157–74.

Slaughter, Sarah. 1991. *"Rapid" Innovation and Integration of Components: Comparison of User and Manufacturer Innovations Through a Study of Residential Constructions*. MIT Ph.D. Dissertation (Management of Technology).

———. 1993. "Innovation and Learning During Implementation: A Comparison of User and Manufacturer Innovations." *Research Policy* 22:81–95.

Sokoloff, Kenneth. 1988. "Inventive Activity in Early Industrial America: Evidence from Patent Records, 1790–1846." *Journal of Economic History* 48:813–50.

Statistique Canada. 1985. *Les brevets en tant qu'indicateurs de l'invention* (catalogue 88-504F Hors Série). Ottawa: Ministère des approvisionnements et services. (Also available in English as Catalogue 88-504E).

Svetos, Michele. 1996. "Biotechnology and the Utilitarian Argument for Patents." *Social Philosophy and Policy* 13, no. 2.

Taylor, Christopher T., and Z. Aubrey Silberston. 1973. *The Economic Impact of the Patent System. A Study of the British Experience*. Cambridge, U.K.: Cambridge University Press.

Walker, Charles E., and Mark A. Bloomfield. 1988. *Intellectual Property Rights and Capital Formation in the Next Decade*. New York: University Press of America.

Winter, Sidney G. 1989. "Patents in Complex Contexts: Incentives and Effectiveness." In *Owning Technical and Scientific Information*. V. Weil and J.W. Snapper, eds. New Brunswick, N.J.: Rutgers University Press Pp. 41–60.

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CHILD LABOR, FAMILY INCOME, AND THE URUGUAY ROUND

JIM ROSE

An important area of contention between the industrialized countries of the North and the developing countries of the South at the close of the Uruguay Round was trade and labor standards. The United States and the European Union were among those seeking the international ratification of minimum labor standards regarding freedom of association; the right to form unions; the prohibition of forced labor; the end of child exploitation; and non-discrimination in employment. They argued that the World Trade Organization (WTO) agreement should have included social clauses that allowed countries to act against social dumping: exports from countries with *low* labor (or environmental) standards.

A workhorse of the debate over trade and labor standards is moral outrage over children working in sweatshops. For example, the U. S. State Department has said:

> Jobs which prevent children from attending school or which subject them to hazardous conditions are exploitative. Such labor is detrimental both to children and their countries. Education is the key to a child's future, just as it is to a nation's future. Rob the former of his or her opportunity to improve himself and the latter is robbed of that opportunity, too. (US DOS 1997)

Most previous reviews of this debate have been qualitative surveys of the moral and economic arguments (Lee 1997). Data have recently become available that throw new light on the issue. Field research by the International Labor Organization (ILO 1996, 1997a,b,c,d) suggests that prohibitions on child labor in developing nations could result in large reductions in family incomes. These data invite analysis of more venal explanations for the resurgence of the child-labor debate.

As an aside, the child-labor debate is an opportunity to illustrate the unity in economic thinking about controversial microeconomic policy issues. The emerging consensus among economists about child labor in developing countries will be

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illustrated by showing the interchangeability in views of Austrian economists such as Block (1993), Mises (1998) and Rothbard (1993) with a wider spectrum of economists such as Becker (1997), Bhagwati (1987), Krueger (1996) and Krugman (1997a).

Institutional Background

The WTO was established in January 1995 as the successor to the Secretariat to the General Agreement on Trade and Tariffs (GATT). The GATT was both an international treaty and the media name for the Secretariat located in Geneva that oversees the treaty.

The GATT was founded in 1947 in Havana and dealt only with trade negotiations for goods. Successive GATT negotiating rounds achieved reductions of over 90 percent in tariffs on industrial products traded between the major industrial countries. The GATT's Uruguay Round was completed and signed in Marrakesh in April 1994. The signatories to the treaty agreed to reduce non-tariff barriers in textiles and apparel, product standards, and intellectual property, among other areas, to extended coverage to agriculture and to services, and to establish the World Trade Organization (WTO) to administer the new agreements and settle trade disputes.

Labor Standards and the WTO

The WTO agreements signed in Marrakesh do not deal with any core labor standards. However, some industrial nations including the United States and France believed that the issue should be studied by the WTO as a first step toward bringing the matter of core labor standards into the treaty. Many developing nations believed that efforts to bring labor standards into the arena of multilateral trade negotiations are little more than a smokescreen for protectionism.

At the 1996 Singapore Ministerial Conference of the WTO, after intense lobbying, member nations identified the International Labor Organization (ILO) as the competent international body to deal with labor standards:

> We renew our commitment to the observance of internationally recognized core labor standards. The International Labor Organization (ILO) is the competent body to set and deal with these standards, and we affirm our support for its work in promoting them. We believe that economic growth and development fostered by increased trade and further trade liberalization contribute to the promotion of these standards. We reject the use of labor standards for protectionist purposes, and agree that the comparative advantage of countries, particularly low-wage developing countries, must in no way be put into question. In this regard, we note that the WTO and ILO Secretariats will continue their existing collaboration.[1]

Subsequent to the 1996 Singapore Ministerial Conference, the Clinton administration has sought to accelerate collaboration between the ILO and the WTO and establish a framework for multilateral discussion on how best to promote core labor standards including the elimination of exploitative child labor.[2] The Clinton Administration is seeking the negotiation of a new ILO convention on the worst

[1] See the World Trade Organization at www.wto.org/wto/archives.wtodec.htm at para. 4.

[2] See statements by Samet (1998) and Herman (1998).

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forms of child labor: forced and indentured labor, work by children in hazardous conditions and work by very young children.[3]

THE ILO AND CHILD LABOR

While ILO action against child labor has developed in scope and intensity since 1990, its agenda concerning child workers dates back to the inception of the organization. The first ILO convention on child labor, prohibiting the work of children under the age of 14 in industrial establishments, was adopted within months of the ILO's creation in 1919. Since then, the ILO has adopted nine separate conventions on the minimum age of admission to employment in such sectors, including agriculture, mining, and maritime work. The key instrument was ILO Convention No. 138, which was adopted in 1973. This convention sets either 15 years or the age reached on the completion of compulsory schooling as the minimum age for admission to employment. The minimum age for work that is not likely to jeopardize the health, safety, or morals of young persons is set at 18.

The ILO's conventions are binding on signatories, but the ILO has no power of enforcement. However, failure to comply with the conventions can lead to international pressure to conform; and the ILO recently declared that the very fact of membership in the organization committed member nations to the abolition of child labor. Moreover, building on the international impetus, several bills have been introduced into the United States Congress in recent years to prohibit imports made with child labor or to place sanctions on the exporting country.[4]

HOW MANY CHILDREN WORK AND WHERE?

Child labor is common in the South. The ILO's surveys (1996, 1997a,b,c,d) have suggested that an average of 25 percent of children between the ages of 5 and 14 years old engage in economic activity in developing countries. The ILO found that for a third of these children, work was their principal activity, while for the remaining two-thirds it had been a secondary activity in addition to school. However, when allowing for seasonal variations in economic activities, the proportion of economically active children was around 40 percent on average. Although the great majority of economically active children belong to the 10 to 14 year age group, the proportion of child workers under the age of 10 in the total is far from negligible; the ILO considers that it may be up to 20 percent in some countries.

The ILO (1996) found that the available statistics on school attendance confirm the considerable extent of child labor in the South. For example, some 20 percent of children of primary-school age were not receiving any education in 1990. It must be assumed that a large proportion of these children were engaged in an economic activity. The same year, the proportion of children of secondary-school age but not enrolled in secondary education was around 50 percent; again many must be presumed to be working. There are a large number of children who both study and work. The ILO considers that, according to available national surveys, between 50 and 70 percent of all child workers are in this category.

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[3]Ibid.

[4]See, for example, Child Labor Deterrence Act of 1997 (S. 340 and H.R. 1328) and International Child Labor Elimination Act of 1997 (H.R. 2678).

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Field research by the ILO (1997a,d) in developing countries found that child workers are employed in a wide range of economic activities. The vast majority of child workers are in small production units of the urban informal sector and the rural traditional sector. The modern sector plays a relatively minor role in absorbing child labor; and only a small percentage, probably less than five percent, were found to be employed in export industries. Children employed for cash wages usually account for a relatively small percentage of total child labor. Huge numbers of children work as unpaid workers in family farms, shops, and stores that the ILO considers to depend on family labor for their economic viability.

The ILO (1997c) found that the most common explanations for why employers hire child labor—their lower cost and the irreplaceable skills afforded by children (the *nimble fingers* argument)—were often unsustainable. The ILO concluded that the nimble fingers argument is entirely fallacious in several hazardous industries, including carpet making, glass manufacturing, mining, lock-making and gem polishing. The ILO found that adults perform most activities performed by children in these industries and children more often than not do unskilled work. Even in the hand-knotting of carpets, which calls for considerable dexterity, the ILO found in a study of over 2,000 weavers that children were no more skilled than adults; some of the finest carpets were in fact woven by adults.

Why Do Children Work?

Appalling poverty in developing countries can force everyone in the family to help as best he can in the daily struggle with poor nutrition and health care, dirty water, bad sanitation, and economic stagnation.

> The issue of child labor is vexing: there are legitimate issues of intolerable working conditions, but employment of children may provide food that prevents a family from starving. In some instances, also, it may provide girls with an alternative to forced early marriages. (Krueger 1995, p. 122)

It is common for children who work in developing countries to earn up to a quarter of the family income—contributions that are critical to the survival of their families.

> Poverty, however, emerges as the most compelling reason why children work. Poor households need the money, and children commonly contribute around 20 to 25 percent of family income. Since by definition poor households spend the bulk of their income on food, it is clear that the income provided by working children is critical to their survival. (ILO 1997a)

Interestingly, the U.S. Department of Labor prefers to say that the contribution of children to family income is small.

> Most apologists for child labor cite poverty as the cause. However, the amount of money earned by most child workers is generally a small contribution to the family income. Although children work because they are victims of poverty, by working instead of being educated, they tend to perpetuate the cycle of poverty. (US DOS 1995, p. 3)

However, the U.S. Department of Labor (1995, p. 18) went on to quote UNICEF in Latin America as estimating that "rarely does the proportion of household income

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generated by children exceed 10–20 percent." It is difficult to accept that even a 10 percent reduction in income is "small" for families living on less than a dollar a day. Proposals to restrict child labor must explain what alternative sources of income they offer to the contributions children make to family income—income contributions that the ILO (1997a) views as "critical to their survival."

Why the Increased Political Profile?

The much-increased political profile of the child-labor issue since the end of the Uruguay Round must be due to more than chance. Child labor is not new and, as Krugman (1997b, p. 115) rightly noted, "there are worse things in the world than low wages . . . to excite our moral indignation."

Likewise, opponents of child labor have also always been able to craft emotive political propaganda. The use of emotive propaganda as a key element in agitation for child-labor laws dates as far back as the lobbying for the Factory Acts in the United Kingdom in the 1830s (see Hutt 1954). Block summarized the position well when he wrote:

> High on the list of the enemies of society, one can always find the employer of child labor—cruel, cold hearted, exploitative, cunning, and evil. In the public mind, child labor is almost the equivalent of slave labor, and the children's employer is no better than a slave owner. (Block 1993, p. 223)

Who Gains?

However, certain political or economic constraints or both must have changed recently for the issue of child labor in developing countries to gain so much new momentum since the close of the Uruguay Round.

The common coin of the child-labor debate is moral outrage. However, few suggest that tougher child-labor laws will help economic growth, lower costs of production or otherwise raise the living standards in developing countries in the immediate term.

> Child labor laws, by restricting the supply of labor, lower the production of the economy and hence tend to reduce the standards of living of everyone in society. . . . To reduce the working population while the consuming population remains undiminished is to lower the general standard of living. (Rothbard 1970, p. 42)

Of course, children in developing countries who are not working could go to school and this investment may have long-term benefits. However, this presumes that schools are available—no small assumption in developing countries—and that investment in formal education is the best choice given the stark realities and hardships of life in developing countries. For example, rural schools are often inefficient, and the cost of transporting children to school is higher for rural families (Becker 1991). It should be added that child-labor laws and school-attendance laws are two sides of the same coin.

> Compelling a child to remain in a state or state-certified school until a certain age has the same effect of prohibiting his employment and preserving adult workers from younger competition. Compulsory attendance, however, goes even further in compelling a child to absorb a certain service—schooling—when he or his parents would prefer otherwise, thus imposing a further loss of utility upon these children. (Rothbard 1970, p. 56)

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Without wishing to diminish the value of basic literacy and numeracy, the human capital acquired at schools may be less useful in rural areas of developing countries as compared to cities. Prior to extensive industrialization of a country, the main source of human capital for children is through the family and on-the-job training on farms. For example, the average number of years of formal schooling among the population 15 years and older in developing countries was only 2.1 years in 1960 and was still a low 4.4 years in 1990 (Barro and Lee 1996).

Children in developing countries skip school to work out of necessity. Their work may substantially increase the income and welfare of their families:

> Parents would allow their children to be employed in their own economic enterprise or as wage workers only if, given their market and non-market constraints, family welfare is enhanced by the use of children's time in such employment rather than in other activities (including being in school). Thus proscription of such labor, if strictly enforced without compensation, would lower family welfare of those who are already desperately poor. (Srinivasan 1994, p. 37)

While wages in new industries in the cities of developing countries are often low, they are an improvement over far less visible but very real rural poverty. The claim that offering a desperately poor woman or child a job in a new factory is exploitation dates as far back as the dawn of the industrial revolution. The response has always been the same:

> [Factories] converted starving beggars into self-supporting breadwinners. The factory owners did not have the power to compel anybody to take a factory job. They could hire people who were ready to work for the wages offered to them. Low as these wages were, they were nevertheless much more than these paupers could earn in any other field open to them. It is a distortion of facts to say that the factories carried off the housewives from the nurseries and the kitchens and the children from their play. These women had nothing to cook with and to feed their children. Their only refuge was the factory. It saved them, in the strict sense of the term, from death and starvation. (Mises 1998, p. 615)

A growing industry must offer a competitive wage to get workers to move from their existing jobs in other sectors (Krugman 1997a). Industrial workers in developing countries receive above-average wages and laborers queue for jobs in factories (Krueger 1995, p. 122). Just as during the Industrial Revolution in the North, if better alternatives really were available at home or at school for those children who now have to work in developing countries, their parents would already have taken advantage of them.

> Despite the fact that the employer might be cruel, the job menial, and the salary low, it would be far more injurious to forbid him the opportunity. If there are other, more favorable, alternatives, the young person will avail himself of them even if the law allows him the choice of accepting or rejecting the unfavorable job. If there are no other opportunities, the law prohibiting child labor will take from him this one opportunity, however unfavorable. (Block 1993, pp. 228–29)

There must be reasons for parents in developing countries not to send their children to school if schools are available and when they have a legal obligation to do so. As noted before by the ILO (1996), there is a high level of non-compliance

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with school attendance laws in developing countries. The percentage of the population 15 years old and over with no formal schooling in developing countries was 64 percent in 1960 and was still 40 percent in 1990 (Barro and Lee 1996).

It cannot be presumed that parents in developing countries are ignorant of the benefits of investing in schooling for their children. Such parents are the heads of important units of production for food, old age care, and mutual insurance in addition to the child rearing role that is familiar to families in the wealthy nations.

> In virtually every known society—including ancient, primitive, developing, and developed societies—families have been a major force in the production and distribution of goods and services. They have been especially important in the production, care and development of children, in the production of food, in protecting against illness and other hazards, and in guaranteeing the reputation of members. (Becker 1987, p. 281)

The investment strategies of rural families in developing countries have been relatively pragmatic in the face of changing costs and benefits of schooling. This is because children are net economic assets on farms (Rothbard n.d.). The ILO found that the reason for poor school attendance in the least developed countries was poverty and how families coped rationally with it. As the ILO has noted, some families are so poor that formal schooling is a bad investment for their children.

> The acute need of many households to keep many family members working to ensure income security makes it nearly impossible for them to invest in their children's education. Most "free" public education is in fact very expensive to a poor family, which is expected to meet the cost of books and other school supplies, uniforms and clothes, transportation, and sometimes even provide unofficial payments to teachers. *In some places, the costs for a primary-level student may represent one-third of the entire cash income of a typical poor family, and many families have more than one child of school age.* Moreover, this does not take into account the income that is lost to the family when the child studies rather than works. It is no surprise, therefore, that in many places one of the most important reasons why children work is to earn money to pay for their own school expenses. . . . However, even when schools are available, the comparatively high cost to poor families of investment in the education of their children means that the return on such investment must also be high. (ILO 1996, emphasis added)

Children can start farm work in developing countries as young as five and make sizeable contributions as they grow older (Becker 1991). The economic value of children in agrarian societies has been long recognized. For example, Adam Smith wrote of the value of children in colonial America:

> Labor is there so well rewarded that a numerous family of children instead of being a burthen [sic] is a source of opulence and prosperity for their parents. The labor of each child, before it can leave the house, is computed to be worth a hundred pounds clear gain to them. A young widow with four or five young children, who, among the middling or inferior ranks of people in Europe, would have so little a chance for a second husband, is there frequently courted as a sort of fortune. (Smith 1979, p. 88)

The main reason that rural families have more children in rural economies is that they are more productive than in cities.

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> The net cost of children is reduced when opportunities for child labor are readily available, as in traditional agriculture. This implies that children are more valuable in traditional agriculture than in either cities or modern agriculture, and explains why fertility has been higher in traditional agriculture. (Becker 1987, p. 281)

Industrialization and urbanization turn children from investment goods for the family into consumption goods for their parents (Rothbard n.d.). Investment in the human capital of children through formal schooling rises, as agriculture (and the wider economy) becomes more mechanized and complex with economic development.

> Economic development raised the relative cost of children because the value of parents' time increased, agriculture declined, and child labor became less useful in modern farming. Moreover, parents substituted away from the number of children toward expenditures on each child, as human capital became more important not only in agriculture, but also everywhere in the technologically advanced economies of the twentieth century. (Becker 1987, p. 282)

The prevalence of child labor has been found to decline sharply with economic development. Krueger (1996) found that employment of young children was common in low-income countries and uncommon in high-income countries. He found that where per capita real GDP exceeds $5,000, the employment of young children is negligible.

It should be recalled that the prosperity (and the associated demise of child labor and the rise in school attendance) in Europe and the United States is a relatively recent phenomenon.

> Child labor was common in Europe and the United States not so long ago. . . . These families who sent their children to work were generally better off than most parents in the Third World who depend on earnings of their children. . . . Child labor did not decline to negligible levels in all parts of the West until the second half of this century. (Becker 1997, p. 12)

The value of children as farm labor in, for example, the United States is not some distant memory from around the turn of the century or before.

> As late as 1950, for example, 44 percent of 16-year-old boys on farms [in the United States] were in the labor force, but only 24 percent of urban boys were in the labor force. It is quite possible that on balance the returns from a child exceeded the costs for farmers until fairly recent times. (Stigler 1987, p. 284)

Many developing nations are still far below the standards of living that prevailed in the United States in the 1950s. The time it will take some poor countries to catch up with developed countries is one illustration that there still is a huge gap between the North and the South. For example, Barro and Sala-i-Martin (1995, p. 3) have calculated that if Ethiopia were to grow at the long-term growth rate of per capita GDP in the United States (1.75 percent), it would take 239 years for Ethiopia to reach the 1990 level of United States real per capita GDP.

It was economic development that eliminated child labor in Europe and the United States earlier this century and encouraged parents to send their children to schools. Lee noted that the minimum labor standards proposed for international trade by, for example, the members of the ILO have evolved with their economic development:

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> Conceptions of economic and social citizenship rights have broadened over time and the scope of labor standards has evolved with it. While there remain those who fall "below the line" drawn at the outset, *that line itself has been raised with rising prosperity.* (Lee 1997; italics supplied)

The "rising prosperity" referred to by Lee must be presumed to be the prosperity of the Western members of the ILO. This is because the representatives of the developing nations strongly oppose the inclusion of social clauses in the GATT. For example, then Indian Prime Minister P.V. Rao described social clauses as "an alibi for raising protectionist trade barriers" (quoted in *The WTO Reader* n.d., p. 27). Bhagwati got to the heart of the matter when he said:

> Developing countries cannot then be blamed for worrying that major OECD countries' recent support for such a clause in the WTO [on labor standards] derives from the desire of labor unions to protect their jobs by protecting industries that face competition from poor countries. These countries fear that moral arguments are produced to justify restrictions on such trade since they are so effective in the public domain. In short, the "white man's burden" is being exploited to secure the "white man's gain." (Bhagwati 1995, p. 31)

It is inappropriate to impose the social values of developed nations—values that rose only with their own very successful economic development—on the South. These very same (but now unsatisfactory) labor practices were permissible at comparable stages in the economic development of the North.

Local laws against child labor and international trade sanctions within the purview of the GATT do not provide parents in developing countries with additional income to support their newly unemployed children, much less to send them to whatever schools they can attend. As Rothbard has pointed out:

> Child labor laws, then, are compulsory unemployment. . . . Not only is the child prevented from laboring, but the income of families with children is arbitrarily lowered by the government . . . child labor laws penalize families with children because the period in which children remain net monetary liabilities to their parents is thereby prolonged. (Rothbard 1970, p. 41–42)

Proposals to restrict child labor through the GATT must explain how they will contribute to economic growth and development in the Third World. Economic growth and development is best understood as an increase in the options of people:

> Any proper definition [of economic growth] must surely encompass an increase in economic means available for the satisfaction of people's ends—in short, increased satisfaction of people's wants, or as P.T. Bauer has put it, "an increase in the range of effective alternatives open to people." (Rothbard 1993, pp. 837–38)

Few children in developing countries are likely to have their effective range of alternatives expanded, as either consumers or producers, as the result of stronger international trade laws against the export of the products of child labor. A social clause in the GATT will not build any new schools, improve teaching, or help create replacement jobs, or income for children (or their parents) in the non-traded sector. We need to look elsewhere to find the true beneficiaries of a child-labor clause in the GATT.

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WHO LOBBIED?

Child-labor laws have had a long history of being manipulated for sectional gain. This is because such laws increase the demand for adult labor and disadvantage labor-intensive competitors. Some of the earliest and most famous social reformist laws were the British factory acts of the 1830s: these laws limited the working hours of women and children and, not by coincidence, favored steam mills over water mills. Water mills require a good water flow and they run very long hours when streams and rivers are strong. Working hour restrictions curtailed their ability to produce and to make up for loss of production time when water levels were low. These reforms had the effect of transferring considerable wealth to steam mill owners (Marvel 1977). Senior factory workers played an important role in lobbying for the factory acts in the 1830s because they saw women and children as competitors in the labor market (Anderson and Tollison 1984).

The lobbying for many regulations is fueled by competitor-versus-competitor interests—predation through regulation—rather than a common agenda (Tollison 1991). This is also why consumer and social activists, unions and business groups can form united fronts. Activists and unions want restrictions on the industry as a whole. Incumbent firms will support regulations if they are in a forum that raises the costs of their rivals, or of new firms, or competitors from a particular region or overseas, or of firms using particular technologies, or sources of supply.

A business-union-activist coalition is possible over child labor because a GATT sanctioned prohibition would also reduce import competition in developed countries. Lee centered on the themes of better communication and the emergence of broader-based lobby groups when explaining the resurgence of the child labor issue:

> The global communications revolution . . . has forged vivid public awareness of appalling labor conditions, such as the exploitation of child labor and harsh labor processes for women workers in export processing zones. At the same time, the new wave of democratization and the proliferation of non-governmental organizations with social concerns across the world has brought about more active advocacy of action for dealing with morally unacceptable labor practices, reinforcing the traditional role of trade unions. . . . the increasing public awareness of exploitative labor practices and the political repercussions of popular anxieties over job losses in the industrialized countries, have probably contributed to the raising of the issue of a social clause in international trade agreements by some industrialized countries. (Lee 1997)

Increased globalization is perhaps the main reason why political pressure for protection against imports based on rhetoric about child labor is more effective than before. Manufactured imports into the United States from developing countries have increased substantially since 1970: imports represented 0.3 percent of GDP in 1970, 2 percent of GDP in 1990 and 3.25 percent in 1995 (Golub 1998, p. 96). The percentage of the world's population living in open economies increased from 20 percent in 1960 to more than 50 percent in 1993; and more than 87 percent if China and Russia are included (Sachs and Warner 1995). The average OECD member country has seen its trade share rise from 12.5 percent of GDP in 1960 to 18.6 percent in 1990; and China exported virtually nothing before 1978, but now exports 25 percent of its GDP (Krugman 1995).

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Higher import shares in the North and industrialization in the developing countries in the South imply that it is much more credible for social activists, unions and businesses to allege that manufactured goods made with child labor are likely to be imported. This allows pressure groups to say with enhanced credibility that consumers in developed countries are more likely to buy and thus profit from and otherwise be tainted by the products of child labor. However, as the ILO discovered, less than 5 percent of children work in export industry, but a direct link is not needed. Rising globalization is enough to claim plausibly that there are more child-labor imports.

By converting protection from manufactured imports made by child labor into an issue of personal complicity, the cost of trade policies to exporting countries in the South and the wider issue of Third World poverty are both sidestepped.

Support for bans on imports that are made by child labor allows voters in developed countries to quickly and cheaply escape reminders of poverty in the Third World. A ban on imports of child labor quickly removes child poverty in developing countries from view. More substantive action against child poverty in the South and difficult decisions that might be costly to consumers and taxpayers in developed countries are sidestepped in the same stroke.

The interaction between globalization and the risk of personal complicity is a potential explanation that also helps explain why not all forms of child labor are seen as repugnant by observers in developed countries. The U.S. State Department has said:

> Every job children perform is not necessarily harmful to them or their families. Indeed, children who work on family farms or in family-run businesses or who have part-time jobs after school can benefit from the wages and experience they gain and contribute to their families' welfare. To eliminate this kind of work would be counterproductive. (US DOS 1997)

Even though traditional forms of child labor on farms and in family business are an identical problem in terms of child welfare, school attendance, and family income as outside paid work they are not opposed. Traditional forms of child labor carry little risk of personal complicity for the consumers and voters of developed countries.

WHAT ABOUT CHILD SLAVERY?

Child slavery is also part of the international labor standards debate. The blame for the persistence of child and adult slavery rests with the governments of the jurisdictions where it occurs. An effective criminal justice system is unlikely to consume more than a tiny percentage of GDP in any reasonable country.

> Why do any countries committed to the principle of free markets and democratic government not have effective systems for the protection and enforcement of the liberties that undergird a democratic free-market system? Poverty cannot be the answer, or at least the complete answer. Few countries outside of sub-Saharan Africa cannot afford the relative handful of minimally honest and competent judges, lawyers, prosecutors, and police that is necessary to operate a legal system whose only job is to protect and enforce the fundamental rights to property, contract, and personal safety. (Posner 1995)

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Child and adult slavery are, by implication, outlawed with the law prohibiting crimes such as assault false imprisonment, and threatening behavior. International cooperation in criminal-law enforcement and the suppression of slave trading and trading in the proceeds of crime are not new. However, the ILO and WTO are not the best forums to coordinate the cross-border seizure of the proceeds of crime. Apart from difficulties with proof, there is the possibility of abuse of the process by those seeking relief from import competition through spurious allegations that particular products may be made with slavery.

CONCLUSION

We are no longer limited to qualitative discussions of the merits of a social clause in the GATT against child labor. Future debates should be in quantitative terms. Child labor can contribute up to 25 percent of family income—contributions that the ILO regards as critical to their survival. Child laborers have few alternatives if they lose their jobs as a result of a social clause on labor standards.

It is reasonably clear that child labor falls away quickly with economic development. However, multilateral trade agreements against child labor such as those proposed for inclusion in the WTO (and ILO) do not promote economic development. The contrary is more likely to be the case: they may reduce the range of alternatives available to children and their parents as producers, consumers, and breadwinners in developing countries.

REFERENCES

Anderson, Gary, and Robert Tollison. 1984. "A Rent-Seeking Explanation of the British Factory Acts." In *Neoclassical Political Economy*. David Colander, ed. Cambridge, Mass.: Ballinger.

Barro, Robert, and J. Lee 1996. "International Measures of Schooling Years and Schooling Quality." *American Economic Review* 86, no. 2 (May): 218–23.

Barro, Robert, and X. Sala-i-Martin. 1995. *Economic Growth*. New York: McGraw-Hill.

Becker, Gary. 1987. "Family." In Eatwell et al. 1987. Vol. 1. Pp. 281–86.

———. 1991. *A Treatise on the Family*. Enlarged ed. Cambridge, Mass.: Harvard University Press.

———. 1997. "Is There Any Way to Stop Child Labor Abuses?" *Business Week*. May 12.

Bhagwati, J. 1995. *Free Trade, "Fairness" and the New Protectionism: Reflections on the Agenda for the World Trade Organization*. IEA Occasional Paper 96. Westminster, U.K.

Block, Walter. [1976] 1991. *Defending the Undefendable*. San Francisco: Fox and Wiles.

Eatwell, James, Murray Milgate, and Peter Newman, eds. 1987. *The New Palgrave: A Dictionary of Money and Finance*. 4 Vols. New York: Macmillan.

Golub, S. 1998. "International Labor Standards and International Trade." *Staff Studies for the World Economic Outlook* (December). Washington, D.C.: International Monetary Fund.

Herman, Alexis, M. 1998. Presentation of U.S. Labor Secretary. International Labor Conference. Geneva, Switzerland. June 9, 1998. URL: www.ilc.ilo.org/ilc98/frames.htm.

Hutt, William. 1954. "The Factory Acts System." In *Capitalism and the Historians*. Friedrich A. Hayek, ed. London: Routledge and Kegan Paul.

International Labor Organization (ILO). 1996. *Child Labor: What's To Be Done?* Document for discussion at the Informal Tripartite Meeting at the Ministerial Level (June). Geneva, Switzerland.

———. 1997a. International Program for the Elimination of Child Labor (IPEC) Fact Sheets. International Labor Organization URL: www.ilo.org/public/english/90ipec/factsh/index.htm.

———. 1997b. "Finding Out about Child Labor: The Causes." International Program for the Elimination of Child Labor (IPEC) Fact Sheets. International Labor Organization URL: www.ilo.org/public/english/90ipec/factsh/fs96_2.htm.

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———. 1997c. "Finding Out about Child Labor: The Demand for Child Labor." International Program for the Elimination of Child Labor (IPEC) Fact Sheets. International Labor Organization. URL: www.ilo.org/public/english/90ipec/factsh/fs96_12.htm.

———. 1997d. "Finding Out about Child-Labor Statistics: Revealing a Hidden Tragedy." International Program for the Elimination of Child Labor (IPEC) Fact Sheets. International Labor Organization. URL: www.ilo.org/public/english/90ipec/factsh/fs96_6.htm.

Krueger, Alan. 1996. *Observations on International Labor Standards and Trade*. Industrial Relations. Working Paper 362 (April). Princeton University.

Krueger, Anna. 1995. *American Trade Policy: A Tragedy in the Making*. Washington, D.C.: AEI Press.

Krugman, Paul. 1995. "Growing World Trade: Causes and Consequences." *Brookings Papers on Economic Activity* 1:327–77.

———. 1997a. "In Praise of Cheap Labor." Official Paul Krugman Web Site. URL: www.mit.edu/krugman/www/.

———. 1997b. "What Should Trade Negotiators Negotiate About?" *Journal of Economic Literature* 35 (March): 113–120.

Lee, E. 1997. "Globalization and Labor Standards: A Review of Issues." *International Labor Review* 136, no. 2 (Summer). URL: www.ilo.org/public/english/180revue/articles/lee97-2.htm.

Marvel, H. 1977. "Factory Regulation: A Reinterpretation of Early English Experience." *Journal of Law and Economics* 20, no. 2 (October): 379–402.

Mises, Ludwig von. [1949] 1998. *Human Action: A Treatise on Economics*. Auburn, Ala.: Ludwig von Mises Institute.

Posner, Richard. 1995. "The Costs of Enforcing Legal Rights." *East European Constitutional Review* 4, no. 3 (Summer). URL: www.law.uchicago.edu/Publications/index.html.

Rothbard, Murray N. 1970. *Power and Market*. Menlo Park, Calif.: Institute for Humane Studies.

———. [1962] 1993. *Man, Economy, and State: A Treatise on Economic Principles*. Auburn, Ala.: Ludwig von Mises Institute.

———. n.d. "Minimum Wages and Population." In *A Short Course in Free Market Economics*. Laissez Faire Audio. Side 2.

Sachs, Jeffrey, and A. Warner. 1995. "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* 1:1–95.

Samet, Andrew James. 1998. Presentation of U.S. Government Delegate. 86th International Labor Conference. Geneva, Switzerland. June 18. URL: www.ilc.ilo.org/ilc98/frames.htm.

Smith. Adam. [1776] 1979. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Indianapolis, Ind.: Liberty Classics.

Stigler, George. 1987. *The Theory of Price*. 4th ed. New York: MacMillan.

Srinivasan, T.N. 1994. "International Labor Standards Once Again!" *International Labor Standards and Global Economic Integration: Proceedings of a Symposium*. Washington, D.C.: United States Department of Labor. Pp. 34–39.

Tollison, Robert. 1991. "Regulation and Interest Groups." In *Regulation: Economic Theory and History*. Jack High, ed. Ann Arbor: University of Michigan Press.

United States Department of Labor. 1995. *By the Sweat and Toil of Children: The Use of Child Labor in U.S. Agricultural Imports and Forced and Bonded Child Labor*. URL: www.ilr.cornell.edu/library/e_archive/childlabor/.

United States Department of State. 1997. "The Rights of the Child." United States Department of State. (April 14). URL: www.state.gov/www/global/human_rights/970414_item21.html.

The WTO Reader: Free-Market Critiques of the World Trade Organization. n.d. Auburn, Ala.: Ludwig von Mises Institute.

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CENTRAL BANKING IN THEORY AND PRACTICE. BY ALAN S. BLINDER. CAMBRIDGE, MASSACHUSETTS: THE MIT PRESS, 1998

Richard Layard, in the Foreword to this short volume, states that in this series of lectures[1] Alan S. Blinder "argues powerfully that central banking can only be conducted effectively within a proper intellectual framework." It will come as no surprise to readers of this journal who are familiar with the work of Professor Blinder that his intellectual framework is not one that fellow travelers of either the Chicago or the Austrian[2] Schools will find convincing. However, the book is a must read. The author presents an excellent summary of the recent mainstream debates on the role of a central bank and the conduct of monetary policy and provides a framework for monetary policy that ignores all the lessons, both historical and theoretical, provided by the calculation debate. The author's stellar academic and professional credentials and a self-professed comparative advantage in the theory and practice of central banking (Blinder 1998, p. 2) make his perspective on central banking and monetary policy one which critics, especially Austrian economists, should respond to, not ignore.

Keleher (1998) presents two competing approaches in the recent debates about the role of government in policy coordination. Blinder's intellectual framework fits clearly into the second approach presented by Keleher. As described by Keleher (1998, p. 305) this policy framework "relies more heavily on centralized, public sector decision-making. . . . Relevant information and knowledge are assumed to be readily available for centralized policymakers to execute this strategy; acquiring appropriate information does not pose much of a problem for macro-policymaking." Central bankers and other macroeconomic policymakers can and must "fine tune" the economy. As summarized by Layard (1998, p. ix), Blinder's central-bank policy "must be based on dynamic optimization, where each year we select a plan for now and for the future that will produce the best available time-path for output and inflation."

The strength of the book is that Blinder concisely and clearly presents a framework by which a central bank can, in his opinion, "manage to keep the economy walking the full-employment tightrope without letting inflation accelerate."[3] Blinder is even "up to a point persuasive."[4] But what is never clearly established, in either theory or practice, is why such a framework would be successful.

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[1]The Lionel Robbins Memorial Lectures given by Alan S. Blinder in 1996.

[2]See Yeager 1997.

[3]The quote is from an article by Blinder "The Economic Myths that the 1980s Exploded," *Business Week* (November 27, 1989): 22.

[4]Henderson (1987), in a review of Blinder's *Hard Heads Soft Hearts,* is the source of this comment on the Blinder rhetoric.

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The argument is presented in three steps. The first chapter (lecture), presents a practical framework for implementing "the classical targets-instruments approach." In the second lecture, Blinder (p. 2) addresses what are logically the next questions once one accepts the feasibility of the targets-instruments approach: "What policy instrument should the central bank use? And should it attempt discretionary policy at all, rather than relying on a simple rule?" The last chapter is devoted to normative and positive aspects of central-bank independence. Who should be the *central planner* and how or should the central planner be constrained? This review will focus primarily on the issues raised in lecture one.

After presenting the basic outline of the general targets-instruments problem, in the first lecture, Blinder suggests several shortcomings to the approach: model uncertainty, lags, need for forecasts, choice of instrument, and the choice of the objective function. Or as Blinder (p. 6) succinctly puts it, "[A] curmudgeon could summarize the problems with applying the Tinbergen-Theil program as follows: We do not know the model and we do not know the objective function, so we cannot compute the optimal policy rule." But despite these obstacles "we" must do something. The alternative of a truly unhampered market is unthinkable. Such "know-nothingism is not a very useful attitude."[5]

How then does an active central bank overcome this conceivably difficult if not insurmountable information problem? Blinder's intellectual framework for the proper conduct of monetary policy should remind Austrian economists of the socialists' market answer to the calculation debate. We can overcome the information and lag problems by using several models and "don't ever trust any one of them too much." Set a clear policy over time—"today's monetary policy decision must be thought of as the first step along a path." Use trial and error as feedback in the planning mechanism in two ways. First, following suggestions made by William Brainard, compute the optimal policy responses "and then do less." And second, "[A]t each stage the bank would project an entire path of future monetary policy actions, with associated paths of key economic variables. It would, of course act only on today's decision." If things evolve as expected, follow the projected optimal policy plan. Surprises would be responded to in "obvious ways." Policy should be based on preemptive strikes and policy-making should be by committee. Such a framework should "build in natural safeguards against truly horrendous mistakes."

The second lecture continues the argument for active central monetary planning in much the same vein. There exists no information problem that is not easily swept away. There exists no criticism of central-bank activism that is not wrong. On the choice of an instrument the "scholarly literature was worthwhile and intellectually fascinating. But in the end, real-world events, not theory, decided the issue." Monetarism is dead. "The death of monetarism does not make it impossible to pursue a monetary policy based on rules. But it does mean that the rule cannot be

[5]This listing of potential information and knowledge obstacles to central planning followed by dismissal is typical of Blinder's method of rhetoric. Following a discussion (which is quite good) of the problems of econometric modeling, Blinder (p. 8) concludes, "Yet what are we to do about these problems? Be skeptical? Of course. Use several methods and models instead of just one? Certainly. But abandon all econometric modeling? I think not." Or see his (p. 38) dismissal of the Friedman rules argument, "In all honesty, we must admit there is at least an outside chance that Friedman could be right."

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a money-growth rule."[6] The instrument, if by default, is an interest rate. The problem: which rate? Or as Blinder (p. 30) reminds us, "In other words, the interest rate that the central bank can control doesn't matter (much), and the rates that really matter cannot be controlled." Policymakers seem, again, to face "a devastating conundrum." But again things, for the planners, "are not as bad as they appear."

Policy should be guided in the long run by the neutral interest rate. But despite the use of a familiar term, beware. This neutral rate is not the unhampered market rate of Mises, Hayek, or Wicksell. As defined by Blinder (p. 32) this rate is "the interest rate that equates GDP along this steady-state IS curve to potential GDP." Blinder's neutral rate is "difficult to estimate and impossible to know with precision." A perfect policy instrument for the intellectual framework outlined in the first lecture! The time inconsistency problem is deftly handled in a similar manner. Estimate and target the natural rate of unemployment. Again a market equilibrium concept becomes an operational concept for policymakers, not a market restraint on discretionary policy-making.[7]

The final chapter presents an excellent summary of the literature on central bank independence, but even here Blinder adds his own unique twist. While "central bank independence is a fine institution that ought to be preserved where it exists and emulated where it does not," Blinder (p. 75) adds, "I have also argued that modern central banks ought to assert their independence from the financial markets just as vigorously as they assert their independence from politics. The United States Congress, for example, did not delegate the authority 'to coin money [and] regulate the value thereof' to the bond market; it delegated it to the independent technocrats at the Federal Reserve." The technocrats at the Federal Reserve are the *benevolent despots* of a monetary economy—"tracing out the effects of alternative policy choices, and preaching the message of what effects are good."[8] No political ties, constitutional rules, or market outcomes should prevent these elite of the elite from promoting the *public interest.* This is certainly not an intellectual framework that leads one to ask "What has government done to our money?"

Blinder, like most advocates of discretionary monetary policy, chooses to ignore two fundamental principles of economics and monetary theory. "What makes us rich is an abundance of goods, and what limits that abundance is a scarcity of resources: namely land, labor, and capital. Multiplying coin will not whisk these resources into being." And "we see that while an increase in the money supply, like an increase in the supply of any good, lowers its price, the change does not—unlike other goods—confer a social benefit."[9] Blinder's framework also never addresses ethical problems of the redistribution of purchasing power that follows a monetary injection—the money creation benefits early recipients at the expense of later

[6]The death announcement may be premature. See Timberlake 1993 (p. 361). "Consequently, monetarism as an official central-bank policy had neither failed nor succeeded. It simply had never been tried."

[7]If the terms neutral rate of interest and the natural rate of unemployment are used in the original meanings, a policy of targeting these rates is "no" policy. These are market phenomena. No central bank may be the best monetary policy.

[8]See Brennan and Buchanan 1981 (p. 20).

[9]See Rothbard 1990 (p. 33).

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recipients of the newly created money. Recognition of these principles leads one to look for a broad based intellectual framework for analyzing monetary institutions and policies—an intellectual framework that includes not only sound monetary theory, but also sound ethics and political theory.

Keleher's (1998) preferred framework for monetary policy provides a clear alternative to Blinder's framework. The role of government in this policy approach is based on a constitutional approach to policy. Monetary and other policies and institutions should be aimed at establishing "those institutions and structures that enable the price system to work most efficiently and to promote certain policy rules, standards, and legal conventions."[10] Economists need to remove the *blinders* imposed by the benevolent despot image of policymakers and argue strongly for constitutional restraints on money. Such restraints should, as pointed out by Brennan and Buchanan (1981, p. 21), "guard against dangers that should seem real and obvious enough once they are pointed out—even to a 10-year old!" Blinder's short book should remind critics of the importance of agreement on the necessity of a monetary constitution as a prelude to meaningful monetary reform. As Brennan and Buchanan (1981, p. 65) put it over twenty years ago, "Our charge is: Let us first agree that a monetary constitution is necessary *before* exhausting our energies in debates over the precise content of this constitution! Otherwise, the ship may sink while we debate which lifeboat to use."

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REFERENCES

Brennan, H. Geoffrey, and James M. Buchanan. 1981. *Monopoly in Money and Inflation: The Case for a Constitution to Discipline Government.* London: Institute of Economic Affairs.

Dowd, Kevin, and Richard H. Timberlake, Jr., ed. 1998. *Money and the Nation State: The Financial Revolution, Government, and the World Monetary System.* New Brunswick, N.J.: Transaction Publishers.

Henderson, David R. 1987. "A Liberal Economist's Case." *Fortune* (November 9). P. 185.

Keleher, Robert E. 1998. "Global Economic Integration: Trends and Alternative Policy Responses." In Dowd and Timberlake, ed. 1998. Pp. 305–29.

Rothbard, Murray N. 1990. *What Has Government Done to Our Money?* Auburn, Ala.: Ludwig von Mises Institute.

Timberlake, Richard H. 1993. *Monetary Policy in the United States: An Intellectual and Institutional History.* Chicago: University of Chicago Press.

Yeager, Leland B. 1997. "Austrian Economics, Neoclassicism, and the Market Test." *Journal of Economic Perspectives* 11, no. 4:153–65.

[10] Austrian monetary and business cycle theory are compatible with this approach.

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THE POLITICAL ECONOMY OF ECONOMIC FREEDOM. BY ALAN PEACOCK. CHELTENHAM, U.K.: EDWARD ELGAR, 1997

In the decades following World War II, when the scope of government was increasing dramatically, Alan Peacock was one of those rare British economists who argued for less government. Because his ideas were outside the mainstream, he often attempted to justify them, and this book is a collection of essays and articles, almost all of them previously published, explaining his views on economic freedom. Many books have been written arguing the merits of less government, but this book has the advantage that in many places it draws on Peacock's own experiences as a policy advisor. Abstract ideas about the advantages of economic freedom must be framed in a politically acceptable way if they are to have any impact, and those interested in translating ideas into public policy could benefit from the experiences Peacock describes in this book. The book's strongest feature is the way that Peacock relates the ideas of economic freedom to the development of public policy.

If Peacock had merely presented these ideas as his own, one could analyze them solely on their merits, but Peacock also describes them as liberal, in the British sense, and as libertarian, which will probably be more descriptive to American readers. Thus, the reader is asked not only to consider Peacock's ideas, but also to accept them as being libertarian. Peacock notes that while libertarian ideas are coming into fashion today, they were viewed as quite extreme when he began writing in the 1940s and 1950s, and Peacock deserves credit for publicly standing by his views. It is easier to hold libertarian views today, when many people believe government is too big, than it was in the decades immediately following World War II, when most of both the general public and the economics profession believed that more government management of the economy was appropriate public policy. Yet, by choosing to label his ideas liberal or libertarian, Peacock invites disagreement from readers who hold a different view of libertarianism.

Peacock argues for a paternalistic state that looks out for the economic welfare of its citizens rather than just protecting their rights. When discussing government social insurance programs, Peacock notes that people could insure themselves against calamities that might reduce their income-earning power, but, he continues,

> if individuals cannot be relied upon voluntarily to take out such insurance this does not make a case for some compulsory state scheme, but it does suggest some form of government regulation which would make a minimum level of provision through private sector insurance compulsory. (p. 64)

Despite his claim that liberalism "requires that individuals should accept the necessity for choosing and for recognizing their responsibility for making choices"

The Quarterly Journal of Austrian Economics vol. 1, no. 4 (Winter 1998): 93–95

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(p. 21), Peacock does not believe that individuals should be allowed to make the choice to remain uninsured.

Peacock wants to rely on markets as much as possible, by requiring people to buy private insurance rather than having government insurance, by making government transfers in cash rather than in kind, and by having private broadcasters follow government mandates rather than having the government operate broadcasting facilities directly. These examples show that he sees many places where market failures justify government intervention of some kind, and he believes that one role of the state is to ensure a minimum level of economic well-being for all of its citizens. Peacock is well aware of problems of moral hazard, and realizes that such state guarantees of a minimum level of welfare will induce some to opt for government transfers rather than work. Ultimately, income earners in Peacock's liberal society have the obligation to take care of those who either cannot or simply choose not to earn their own incomes. Peacock never does discuss the reduction in liberty that results from taxpayers being forced to give up their income to support others.

Of course, Peacock's ideas on the subject are not unusual. What is surprising is that Peacock calls himself a libertarian, and explains that his views have been perceived as quite extreme in Britain. My conjecture is that most readers of *The Quarterly Journal of Austrian Economics* are more libertarian than Peacock. They are probably also younger, and perhaps this supports Peacock's point that the libertarianism that people found so extreme decades ago has now become fashionable. Still, readers of *QJAE* are likely to find some of Peacock's arguments to be justifications for statism, rather than the libertarianism he claims. Peacock gives what he calls libertarian arguments in favor of state-supported income redistribution (p. 64), state-financed education subsidies (p. 65), subsidized public service broadcasting (p. 304), and government intervention to outlaw cartels and control mergers (p. 105). The point is, despite his libertarian claims, Peacock envisions a substantial role for the state in economic activity.

Peacock is quite sympathetic to the Austrian approach to economics. He uses Austrian arguments about the market process to justify laissez-faire policies, refers favorably to the Austrian School, and references the ideas of economists such as Hayek, Kirzner, Mises, and Lachmann, when making his case for economic freedom. When he discusses the possibility that government action might be called for to regulate monopolies and reduce concentrated economic power, Peacock refers to the Austrian market process view of competition, which he contrasts with the neoclassical equilibrium approach, to support minimal government intervention (pp. 30–31). Peacock takes a utilitarian approach to defending economic freedom here, supporting economic freedom because it produces better results, but he does suggest that in some cases state intervention may be warranted, again on utilitarian grounds, when markets are not sufficiently competitive. Only a page later (p. 32) he criticizes taking a utilitarian approach to economic policy.

In several chapters, Peacock discusses the efficiency problems that arise with government taxes, subsidies, and regulations, and with government decision-making more generally. He emphasizes agency problems, informational asymmetries, and the private interests of those involved in the decision-making process. There are really no new ideas here, but he does clearly explain why resources tend to be used inefficiently in the public sector, and why government policies are not always

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in the public interest. From these chapters, one can conclude that Peacock's libertarian leanings come at least partly from his conviction that the private sector allocates resources better than the public sector, although in other places Peacock makes it clear that he believes freedom has intrinsic value, independent of the other benefits it produces.

Peacock's discussion of policy issues integrates the principles of economic theory with the realities of the political structure, showing that political considerations are always an important component of the degree to which the advice of economic advisors will be incorporated into public policy. In many places, he relates stories about his own personal involvement in the policy-making process, drawing lessons from his experience. These insights from Peacock's own experience are perhaps the book's biggest contribution. We can discuss the ideas of economic freedom in the abstract, but translating them into public policy in a modern government is another thing altogether. Those who want to become directly involved in public policy-making can benefit from what Peacock has to say, but his experience will also lend insight to academicians, who should take a more realistic account of the actual policy-making process when analyzing policy issues.

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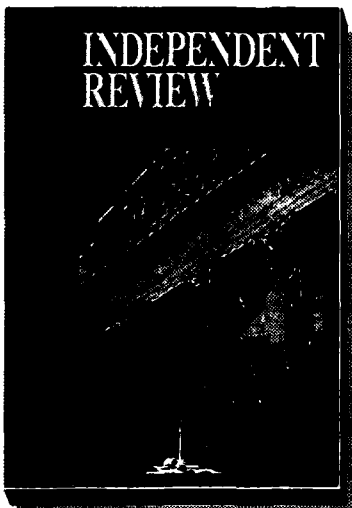

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